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K E N Y A P M C T
P R O J E C T

PMCT TRAINING CURRICULUM

**Prevention of mother-to-child
transmission of HIV**

**A short course for health workers
providing PMTCT services in areas with limited resources
and high HIV prevalence**

PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

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KENYA PMCT
PROJECT

Partners:

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Introduction

In the past 15 to 20 years, HIV has emerged as a global pandemic. The most severely affected areas are in sub-Saharan Africa, where two-thirds of the 37 million people with HIV live. HIV is transmitted primarily through sexual contact, from mother to child, and by contact with contaminated blood or instruments. The number of men and women affected is almost equal, although HIV prevalence peaks at different ages—20 to 30 years in women and 10 years later in men.

In many areas of sub-Saharan Africa, both urban and rural, one in every three to four pregnant women has HIV infection. This means that many children born in this region are exposed to HIV. It is estimated that every year 500,000 new HIV infections occur in infants. Most of these infections are a result of mother-to-child transmission (MTCT) during pregnancy, at the time of delivery or postnatally through breastfeeding. It is estimated that half of the transmissions take place during delivery and a third to a half through breastfeeding.

It has been demonstrated that using antiretroviral drugs during pregnancy, delivery and early neonatal life is effective in preventing MTCT transmission of HIV. A variety of protocols based on Zidovudine, Nevirapine and Lamivudine as monotherapy or in combination are now in use. Elective caesarean section and avoidance of breastfeeding have also helped prevent such transmission, and by such means developed countries hope to eradicate MTCT of HIV.

In developing nations, where funds and trained personnel are in short supply but where most of the HIV-infected people live, preventing mother-to-child transmission presents many challenges. The first is that breastfeeding is the cornerstone of infant feeding. In the pre-HIV era, it was essential for the survival of children. Many studies have demonstrated that breastfeeding protects the newborn infant against diarrhoea and pneumonia, two leading causes of infant morbidity and mortality. Even now during the current HIV pandemic, the majority of infants are born to uninfected women. Hence uninfected women and women of unknown status should still be encouraged to breastfeed their infants. Preliminary data suggest that exclusive breastfeeding may be associated with lower risk of breast-milk transmission of HIV. The health worker who is providing PMTCT services needs to be knowledgeable and skilled to advise both HIV-infected and uninfected women how best to feed their infants.

The second big challenge is to make voluntary counseling and testing (VCT) services more widely available. Testing services are not adequate, and consequently, most pregnant women and their partners are not aware of their HIV status. Provision of HIV testing in the antenatal clinic context requires skills in counseling individuals and couples, and it requires some knowledge of the cultural norms governing relationships between men and women and the extended family in the context of childbirth. Integrating VCT into the antenatal clinic also means reorganizing client flow to ensure that most, if not all, clients attending the clinic have an opportunity to make a decision about testing.

The third challenge is how to share information with others who are working with the HIV-infected woman without violating her confidentiality and exposing her to stigmatization.

Finally, continued follow-up is needed in both the health facility and the community for persons identified as infected with HIV. Health workers need to be able to refer their clients to ongoing support facilities and to mobilize family and community support.

A needs assessment was carried out among health workers and communities at the beginning of the Kenya PMTCT project. It identified gaps in health workers' knowledge and practice related to preventing mother-to-child transmission of HIV, maternal and infant nutrition, counseling and health education. In April 1999, a team of experts from eastern and southern Africa developed the curriculum for a course designed to fill these gaps. The team included experts on MTCT of HIV, nutritionists, counselors, adult educators and policy-makers.

Experts then selected to write different modules included an obstetrician, paediatricians, lactation management specialists, counselors and an adult educator. Initial drafts of the modules underwent an extensive period of peer review. In December 1999, the course was pilot tested during a training-of-trainers course, which was conducted by the experts who had written the modules. After further text revisions and beginning in January 2000, the trained trainers went out to conduct a series of training courses for health providers. By the end of 2001, over 500 health workers had been trained using this course. They are now providing PMCT services at various locations in Kenya. Other PMCT projects in Kenya, in addition to the Kenya PMCT project, have also used the course to train their providers in PMCT.

Extensive revisions of the course have been carried out, based on comments and criticisms from various sources. In the early workshops conducted using this course, experts in different fields would sit in during the training and report back to the module writers about the sessions. The trainers who conducted the sessions also gave the writers feedback. Furthermore, during each training workshop each course participant filled in a form rating the clarity of materials, the duration of the session and the adequacy of the materials.

The course is targeted at those who provide MCH services at the district hospital—the midwife or nurse. Course participants, however, have included all cadres of health workers such as doctors, clinical officers, pharmacists, environmental technicians and nutritionists. Trainers of the various modules in the course must be experts in the particular field. For example, the module on counseling is conducted by an experienced HIV counselor and the child nutrition module is conducted by an expert in lactation management.

The course design is an integrated approach to PMTCT in the setting of mother and child health.

The curriculum consists of five training modules; conducting it requires 10 working days.

1. Mother-to-child transmission of HIV: epidemiology and prevention strategies—2 days
2. Maternal nutrition and preparation for breastfeeding—2 days
3. Child nutrition—3 days
4. Counseling skills for prevention of mother-to-child transmission of HIV—2 days
5. Advocacy and community mobilization for MTCT intervention—1 day

The area of PMCT is changing very fast, and this course will certainly change in structure, content and duration. The intent is that this first edition, published in 2002, will be revised periodically. The publishers therefore request users and readers to send in their comments. They will be compiled and used in the periodic revisions of the course.

Symbols



INTRODUCTION



OBJECTIVE



DEFINITION



KEY MESSAGE



QUESTION



DISCUSSION



WRITE



DURATION OF LEARNING SESSION



CLINICAL



GROUP WORK

PMCT TRAINING CURRICULUM



Module 1

MOTHER-TO-CHILD TRANSMISSION OF HIV: EPIDEMIOLOGY AND PREVENTION STRATEGIES

by

Dr Dorothy Mbori-Ngacha

with

Dr Ruth Nduati

Module 1

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Unit 1

Epidemiology of mother-to-child transmission of HIV

by

Dr Dorothy Mbori-Ngacha


with

Dr Ruth Nduati

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Epidemiology of mother-to-child transmission of HIV


 This unit presents current information on the epidemiology of mother-to-child transmission (MTCT) of HIV. It presents the risk factors for MTCT, which suggest possible ways to intervene to prevent it.

🎯 Objectives

At the end of this unit participants should be able to

- ⇒ describe the epidemiology of HIV globally, in sub-Saharan Africa and Kenya
- ⇒ describe the epidemiology of HIV in pregnant women in sub-Saharan Africa with emphasis on Kenya
- ⇒ describe the modes of transmission from an infected pregnant woman to her infant
- ⇒ discuss the risk factors for mother-to-child transmission of HIV

 The key message is that MTCT of HIV is a major public health problem in Kenya.

Use the 'Epidemiology' set of transparencies to present the information for this session. Use the transparency at the point indicated in the text with a flag , title and number.



1-1-1

HIV status worldwide

This overhead transparency shows data on the magnitude of the problem of HIV/AIDS globally. Make the points that follow.

The epidemic of HIV and AIDS has become a major problem in many countries globally. The overwhelming majority of HIV-infected people, more than 90%, live in the developing world and most of them do not even know

that they are infected. Two in every three persons living with HIV/AIDS live in sub-Saharan Africa. Adults living in sub-Saharan Africa are 10 times more likely to be infected with HIV than adults in North America and 20 times more likely than adults in Western Europe. Of every 10 women currently living with HIV, 8 are in sub-Saharan Africa. And of all the children born with HIV globally, 9 in every 10 are in this region.



HIV/AIDS pyramid in Kenya

1-1-2

This transparency illustrates the magnitude of HIV/AIDS presence in Kenya. Use the pyramid to make the point that the number of reported AIDS cases grossly understates the problem.

As of June 1999, AIDS cases that had been reported numbered 87,070. The National AIDS Control Programme estimates that the actual number of AIDS cases was 760,000 and that an additional 1.9 million people had HIV infection, including 106,000 children under the age of 5.

According to the latest estimates, 13 to 14% of all adults in Kenya are infected with HIV. About 200,000 people will become newly infected with HIV this year.

The epidemiology of HIV in pregnant women

In Kenya, the proportion of women attending antenatal clinics who have HIV infection has continued to increase in all districts. The rapid spread of HIV means that no district in Kenya can be complacent about AIDS.

Pregnant women testing positive in Kenyan urban centres



1-1-3

This transparency presents current data from the National AIDS Control Programme on the prevalence of HIV in Kenya.



This information is obtained from surveillance in selected rural and urban centres and is updated regularly. Highlight data from various regions in the country before discussing the magnitude of the problem in the district where you are conducting the course.



1–1–4

Modes of transmitting HIV

Heterosexual contact

Heterosexual contact is the main mode by which HIV is transmitted in Kenya and other parts of sub-Saharan Africa. The risk of infection increases substantially if either partner has a large number of sexual partners or has a sexually transmitted disease.

Perinatal transmission

A woman is usually infected by her sexual partner. She in turn, if she becomes pregnant, can pass on the infection to her child—during pregnancy, or at time of birth or through breastfeeding.



This is termed mother-to-child transmission of HIV.

Most children with HIV have acquired the infection from their mothers—during the mother's pregnancy, at the time of delivery or through breastfeeding.



Ask the participants to estimate how commonly they think that MTCT of HIV occurs.

The proportion of HIV-infected women who pass on the infection to their infants varies but generally ranges from 30 to 40% in sub-Saharan Africa. In Kenya, current estimates are that 106,000 children under the age of 5 years are infected with HIV.

Blood transfusion

Transfusion with blood from an individual with HIV will invariably transmit the virus. In Kenya, this mode of transmission is not significant because almost 100% of the blood is screened for HIV before it is transfused.



1–1–5

Mother-to-child transmission of HIV



Present a case scenario using local statistics to highlight the magnitude of the problem of MTCT of HIV. Ask the participants to fill in the blanks in the scenario presented below:

The prevalence of HIV infection in women who attend antenatal clinic in this district is estimated as _____. Refer to table 1.1.1 below.

Given that 30 to 40% of HIV-infected women transmit the virus to their babies, _____infants born in this district may become infected with HIV.

Risk factors for mother-to-child transmission of HIV

Maternal and infant factors

Not all pregnant women who have HIV transmit the virus to their infants. But women with high concentrations of the virus in their bodies are more likely to transmit it.



1-1-6

Viraemia and antibodies during the course of HIV infection

Although a person infected with HIV feels well at first, the amount of virus in the body is highest soon after the person acquires the infection. The body is then able to fight the virus and bring the level down, and the person may

Table 1.1.1

Percentage of pregnant women testing HIV positive by sentinel site (urban)

Sentinel site	1990	1993	1996	1998
Busia	17	22	28	29
Garissa	5	4	5	8
Kakamega	5	9	10	16
Kisii	2	2	16	16
Kisumu	19	20	27	29
Kitale	3	7	2	18
Kitui	1	7	4	10
Meru	3	2	15	23
Mombasa	10	16	12	17
Nairobi	6	16	16	16
Nakuru	10	22	27	26
Nyeri	3	3	9	17
Thika	2	27	13	34

remain healthy for many years. But the virus slowly destroys the immune cells, which protect against illness. The result is a state of immunosuppression. With time, the body becomes less able to fight infections and the infected person develops AIDS. During these final stages of the disease, the amount of virus in the blood is again very high. Therefore, pregnant women who have just recently acquired the virus and those who have progressed from HIV infection to AIDS are more likely to transmit the virus to their infants. Laboratory tests can quantify the amount of virus (viral load) and can evaluate the degree of immunosuppression (CD4 counts).



1-1-7

Maternal and infant risk factors for MTCT of HIV

The transparency and the list below give other factors that increase the risk of MTCT of HIV.

- Maternal nutritional status has been noted to play a role in MTCT of HIV. Vitamin A deficiency in HIV-infected women increases the likelihood that they will transmit the virus to their infants.
- Infections of the placenta and cord are associated with increased MTCT of HIV. These infections, such as sexually transmitted infections (STIs) and malaria, reduce the effectiveness of the placental barrier against foetal infections.
- Premature delivery has also been associated with increased risk of MTCT of HIV. Prematurity may be a consequence of infections such as STIs and malaria or may be due to poor maternal nutritional status.

Delivery-related factors

Most mother-to-child transmission of HIV occurs during delivery. The factors listed on the transparency are now known to increase the risk of that transmission.



1-1-8

Delivery-related risk factors for MTCT of HIV

Exposure of the infant to maternal blood and secretions during delivery, either through invasive procedures or through prolonged rupture of amniotic membranes, puts an infant at a higher risk of acquiring the infection from its mother.



Breast-milk transmission of HIV

1-1-9

- Breast-milk transmission of HIV can take place at any point during lactation. Most transmission takes place in the first 6 weeks of the infant's life. However, prolonged breastfeeding increases the risk of transmitting HIV.
- Oral disease in a breastfeeding infant such as thrush and oral ulcers increases the risk of transmitting HIV through breastfeeding, because mouth sores or thrush in the infant make it easier for the virus to get into the baby through the damaged skin.
- Breast disease in the mother such as cracked nipples, particularly if there is nipple bleeding, mastitis or breast abscess, may increase the risk of HIV transmission through breastfeeding.

Group work



Turn off the projector, place the participants in small groups of four or five each, and undertake the following exercise for 30 minutes. Then have each group make a 5-minute presentation of its work.

Group work: Based on the information presented in this session, design a package to prevent MTCT that you can use in your district hospital.

Then make the following concluding remarks.

This session highlights the magnitude of the problem of MTCT and the associated risk factors. With the group work, you have started to outline possible interventions.



Summary

1-1-10

HIV infection rates in Kenya are high, about 14% among all adults and over 20% in pregnant women in some areas of Kenya. Risk factors for MTCT include

- ⇒ mother's stage of disease
- ⇒ presence of STIs, malaria, vitamin deficiencies
- ⇒ delivery practices
- ⇒ breastfeeding

However, specific interventions can reduce the rate of mother-to-child transmission.

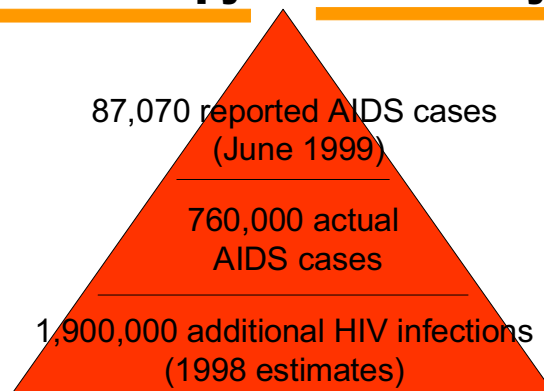
Unit 2, Prevention of mother-to-child transmission of HIV, gives a more detailed discussion on the interventions to prevent MTCT of HIV.

HIV status worldwide end 1999

- ◆ 50 million worldwide had been infected since the beginning of the epidemic
- ◆ 33 million were living with HIV
- ◆ 5.6 million new HIV cases estimated in 1999
- ◆ 22.5 million in Africa were living with HIV
- ◆ In Africa, for every 5 men with HIV, there were 6 women who were HIV positive, aged 15 to 49

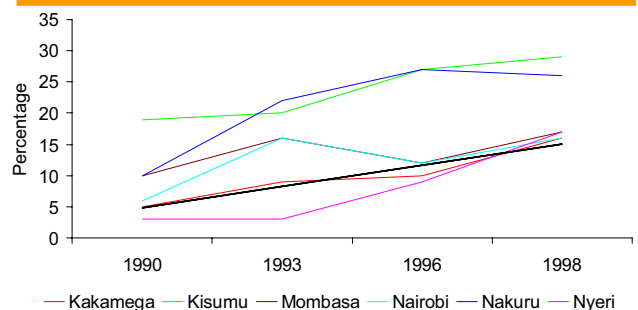
1-1-1

HIV/AIDS pyramid in Kenya



1-1-2

Pregnant women testing positive in Kenyan urban centres



1-1-3

Modes of transmitting HIV

- ◆ Heterosexual contact
- ◆ Perinatal transmission
- ◆ Blood transfusion

HIV can be passed from an infected woman to her child during pregnancy, or at time of birth, or through breastfeeding. This is mother-to-child transmission of HIV.

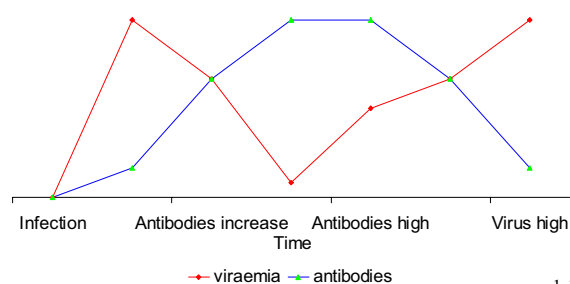
1-1-4

Mother-to-child transmission of HIV

- ◆ What is the prevalence of HIV infection in women attending antenatal clinic in this district?
- ◆ Given that 30 to 40% of HIV-infected women transmit the virus to their infants, how many infants born in this district may become infected with HIV?

1-1-5

Viraemia and antibodies during the course of HIV infection



1-1-6

Maternal and infant risk factors for MTCT of HIV

- ◆ Viral load
- ◆ Immunosuppression
- ◆ Vitamin A deficiency
- ◆ STDs
- ◆ Malaria
- ◆ Prematurity
- ◆ First-born twin

1-1-7

Delivery-related risk factors for MTCT of HIV

- ◆ The mode of delivery
- ◆ Prolonged rupture of amniotic membranes
- ◆ Episiotomy
- ◆ Invasive foetal monitoring

1-1-8

Factors influencing breast-milk transmission of HIV

- ◆ Prolonged breastfeeding
- ◆ Oral disease in the infant, such as thrush and oral ulcers
- ◆ Breast disease, such as cracked nipples and mastitis

1-1-9

**Summary: epidemiology of
mother-to-child transmission**

- ◆ HIV infection rates in Kenya are very high, at about 14% among all adults, and over 20% in pregnant women in some areas of Kenya
- ◆ Risk factors for MTCT include
 - mother's stage of disease
 - presence of STIs, malaria, vitamin deficiencies
 - delivery practices
 - breastfeeding
- ◆ Specific interventions can reduce the rate of mother-to-child transmission

1-1-10

Unit 2

Prevention of mother-to-child transmission of HIV

by

Dr Dorothy Mbori-Ngacha

with

Dr Ruth Nduati


2

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Prevention of mother-to-child transmission of HIV

This unit presents current information on the mother-to-child transmission (MTCT) of HIV with an emphasis on practical and workable intervention strategies.

Use the ‘Prevention’ set of transparencies to present the information for this session. Use the transparency at the point indicated in the text with a flag , title and number.

Objectives

At the end of this unit participants should be able to discuss possible interventions for preventing mother-to-child transmission of HIV.



The key message is that although MTCT of HIV is a major public health problem, interventions can be used to reduce transmission.

Introduction



It is possible to prevent HIV transmission from mother to child.

It is important to remember that the best way to prevent infection of children is to help their fathers and mothers avoid becoming infected in the first place, and to avoid infecting each other. Men must not forget their responsibility for protecting their families.



Primary prevention of HIV infection in infants

1–2–1

- However, many women are already infected, and it is necessary to try to reduce the risk of their babies becoming infected.
- Some interventions will benefit all pregnant women, and a woman's knowledge of her HIV status is not necessary to implement them.

- Some of the interventions specifically target women with known HIV status and therefore require antenatal HIV testing.



Antenatal interventions

1-2-2

- Improve maternal health and nutritional status during pregnancy by routine supplementation with haematinics and multivitamins.
- Screen and treat STIs in pregnant women.
- Administer malaria chemoprophylaxis in malaria-endemic areas.
- Reduce maternal viral load by using currently recommended regimens of antiretroviral drugs.



Long-course AZT

1-2-3

Antiretroviral regimens

Show the currently recommended regimens on the overhead transparency and review each regimen.

- Various regimens of antiretroviral drugs during pregnancy and peripartum have been shown to be effective in reducing MTCT in various degrees.
- The choice of regimen will be determined by the cost, the feasibility of administration, the period of gestation at which a woman first comes to the antenatal clinic and her ability to tolerate the medication and comply with the regimen for it.



Thai short-course AZT regimen

1-2-4

Most information currently available is on the use of AZT. The Thai regimen of AZT has been demonstrated to be effective, reducing MTCT by half.



Other drug regimens

1-2-5

- One dose of Nevirapine for the mother and one for the baby has been shown in Uganda to reduce MTCT by 40%.
- The recommendation for the choice of antiretroviral drug will continue to change as more information becomes available. It will therefore be necessary for health workers to keep updated.
- It is important to note that antiretroviral drugs used in pregnancy to prevent MTCT do NOT treat the mother.



Interventions during labour and delivery

1-2-6

- Minimize the contact of the infant with maternal blood and secretions by preventing prolonged rupture of membranes.
- Use invasive procedures minimally and judiciously. These procedures include amniocentesis, cordiocentesis or taking a sample from the placenta; artificial rupture of the membranes; blood transfusion. Also make minimal use of procedures that lead to exposure to maternal blood, such as episiotomy, vacuum delivery, forceps delivery or neonatal suction.
- Vaginal cleansing with 0.25% chlorhexidine solution reduces the risk of neonatal and puerperal sepsis and may also have an effect in reducing HIV transmission to the infant, particularly where rupture of the membranes has been prolonged. (The use of vaginal cleansing with an antiseptic solution is being researched in some places to reduce MTCT.)



Ways to prevent transmitting HIV with breast milk

1-2-7

A detailed discussion on this topic is undertaken in module 3, 'Child nutrition', in unit 3, 'Infant feeding choices for the HIV-infected mother'.

Breast-milk transmission of HIV

- Breastfeeding is the optimum form of infant nutrition and should continue to be protected, promoted and supported.
- However, HIV can be transmitted through breastfeeding.

- HIV can be transmitted at any time during breastfeeding, so babies of HIV-positive mothers who breastfeed for 2 years or more are more likely to be infected with HIV than babies who either do not breastfeed at all or who stop breastfeeding after a few months.
- Women who are known to be HIV positive will need counseling on infant feeding, to help them to make the best decision in their given circumstances. Whatever decisions an HIV-infected woman makes, she needs support to carry them out.
- The feeding options available to HIV-infected women include avoiding using breast milk completely by using replacement feeds such as infant formula, modified cow's milk, or soy milk; or reducing the risk of breast-milk transmission by
 - ⇒ reducing the duration of breastfeeding
 - ⇒ avoiding breastfeeding when a woman has breast disease, such as mastitis or cracked nipples
 - ⇒ aggressively treating oral thrush in breastfeeding infants



Make an additional point about caesarean section, as follows.

Caesarean section

You may have heard that delivery by caesarean section may reduce the chances of a mother transmitting the virus to her infant. The use of elective caesarean section has been demonstrated to reduce the risk of MTCT in industrialized countries. This intervention has not been evaluated in settings such as prevail in sub-Saharan Africa. It is currently not clear whether this is a feasible intervention in these settings.



Turn off the projector and undertake the following exercise:

Group work

Divide the participants into two groups.

Group 1

Have participants conduct a role-play of a worker giving a health talk to a group of women attending an antenatal clinic on the benefits of HIV testing.

Group 2

Have participants conduct a role-play of a health worker giving a talk to a group of women attending an antenatal clinic on the interventions to prevent mother-to-child transmission of HIV.

After the role-plays, summarize the group work using the following points:

- If no intervention is carried out, about one in three babies born to HIV-positive women will become infected.
- Mother-to-child transmission of HIV is affected by a number of factors. Knowledge of these factors suggests various ways in which the risk can be reduced.
- Knowledge of a woman's HIV infection status through voluntary counseling and testing is an important entry point in preventing mother-to-child transmission of HIV, since there are specific interventions that an HIV-infected woman can request to improve her and her baby's well-being.



The essential package for preventing MTCT

1–2–8

1–2–9

Review the components of the essential package of care for the prevention of MTCT, indicating the components of the package that require knowledge of a woman's HIV status and those that do not.



Summary

1–2–10

This session has presented the components of an essential package for the prevention of mother-to-child transmission:

- Prevent HIV infection in young women.
- Provide family planning counseling for HIV+ women and improved antenatal clinic services for all women.
- Use antiretroviral drugs in the antenatal period.
- Cleanse vagina with 0.25% chlorhexidine solution during labour.
- Avoid invasive procedures during labour and delivery.
- Counsel about avoiding exposure to breast milk.

Primary prevention of HIV infection in infants

- ◆ Intensify efforts to prevent HIV infection in young women
- ◆ Promote voluntary counseling and testing before marriage and before pregnancy
- ◆ Promote condom use during pregnancy to prevent infection with HIV and other STIs
- ◆ Ensure that HIV+ women have access to family planning counseling and services

1-2-1

Antenatal interventions

- ◆ Routinely supplement with haematinics and multivitamins
- ◆ Screen and treat STDs in pregnant women
- ◆ Provide malaria chemoprophylaxis in malaria-endemic areas
- ◆ Reduce maternal viral load using currently recommended regimens of antiretroviral drugs

1-2-2

Long-course AZT

- ◆ During pregnancy—300 mg orally b.d. starting at 14 to 34 weeks
- ◆ For mother during labour—2 mg per kg IV for first hour then 1 mg per kg IV until delivery
- ◆ For baby—2 mg per kg AZT syrup every 6 hours for 6 weeks

1-2-3

Thai short-course AZT regimen

- ◆ Give Zidovudine (AZT) 300 mg twice daily from 36 weeks of gestation
- ◆ With the onset of labour, give Zidovudine 300 mg every 3 hours until delivery

1-2-4

Other drug regimens

- ◆ Nevirapine
 - 200 mg orally during labour
 - 2mg/kg syrup for baby within 72 hours
- ◆ Ditrane AZT regimen
 - 600 mg o.d. starting at 36 to 38 weeks
 - 600 mg stat at onset of labour
 - 600 mg o.d. for 1 week post-natal (mother)
 - no treatment of baby

1-2-5

Interventions during labour and delivery

- ◆ Prevent prolonged rupture of membranes
- ◆ Minimize use of invasive procedures—episiotomy, vacuum delivery, forceps delivery or neonatal suction
- ◆ Cleanse vagina with 0.25% chlorhexidine solution

1-2-6

Ways to prevent breast-milk transmission of HIV

- ◆ Avoid breast-milk feeding completely *or*
- ◆ If the woman opts to breastfeed—
 - Encourage exclusive breastfeeding with abrupt weaning and avoid mixed feeding
 - Reduce the duration of breastfeeding
 - Avoid breastfeeding when the mother has breast disease—mastitis or cracked nipples
 - Aggressively treat oral thrush or ulcers in the baby

1-2-7

The essential package for preventing MTCT

- ◆ Prevent HIV infection in young women
- ◆ Provide FP counseling for HIV+ women
- ◆ Improve maternal health and nutritional status during pregnancy
- ◆ Screen for STDs in pregnant women and treat them
- ◆ Use malaria chemoprophylaxis in malaria-endemic areas

1-2-8

The essential package . . .

- ◆ Use antiretroviral drugs in the antenatal period
- ◆ Cleanse vagina with 0.25% chlorhexidine solution during labour
- ◆ Avoid invasive procedures during labour and delivery
- ◆ Counsel about avoiding breast milk

1-2-9

Summary: Prevention of mother-to-child HIV transmission

- ◆ Prevent HIV infection in young women
- ◆ Promote VCT before pregnancy
- ◆ Improve antenatal care for all women
- ◆ Modify labour and delivery practices
- ◆ Introduce specific interventions for HIV+ women

1-2-10

Unit 3

Integrating the prevention of mother-to-child transmission of HIV into existing maternal and child health services

3

by

Dr Dorothy Mbori-Ngacha

with

Dr Omondi Ogutu


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Integrating the prevention of mother-to-child transmission of HIV into existing maternal and child health services

↓ Introduction

This unit deals with ways in which the strategies for preventing mother-to-child-transmission of HIV can be integrated into existing maternal and child health (MCH) services.

Use the ‘Integrating’ set of transparencies to present the information for this session. Use the transparency at the point indicated in the text with a flag , title and number.

🎯 Objectives

At the end of this unit, participants should be able to

- ⇒ outline the principles of voluntary counseling and testing for HIV
- ⇒ discuss how the prevention of mother-to-child transmission of HIV can be integrated into existing maternal and child health care

Voluntary counseling and testing

With voluntary counseling and HIV testing, we can identify women who are HIV positive, to offer them help for their condition, to counsel them about prevention of sexual transmission of HIV, and to reduce the risk of MTCT. Maternal and child health services are an entry point for VCT.

Definition of VCT

The testing also identifies women uninfected by HIV, who can then be given information that will help them to remain uninfected.

A detailed discussion of the principles and practice of VCT will be undertaken in module 4, ‘Counseling skills for the prevention of mother-to-child transmission of HIV’.

Testing for HIV

The routine HIV tests detect the presence of antibodies to the human immunodeficiency virus in a person’s blood. A positive result shows that the person is infected with HIV but does not indicate how long the person has been infected or the stage of the disease.

Machine-read ELISA testing is done in many hospital laboratories, but the use of rapid HIV tests is increasing. Both machine-read ELISA tests and rapid tests are antibody based; that is, they detect the presence of antibodies that the body of an HIV-infected person makes in response to the infection.

HIV testing strategies

Machine-read ELISA testing

- Is done in batches of blood samples so individual samples cannot be tested.
- Requires serum so a venous sample must be drawn and then centrifuged.
- Is slower; it can take a few days to 2 weeks to get the test result.
- Needs specially trained staff and must be done in a centralized laboratory.
- May be cheaper if a number of blood samples are tested at the same time.
- Requires electricity for centrifuging and to run the tests.

Rapid HIV testing strategies

- Can be done at the antenatal clinic or VCT centre whenever the woman comes in.
- Batching of samples is usually not required.

- Is quick, with results available the same day.
- Does not require skilled staff or laboratory equipment.

Whole blood versus serum-based rapid tests

Rapid tests in the past required the use of serum, so a venous sample was required. The latest generation of rapid tests can use whole blood, so only a fingerprick sample is needed. These tests are usually simple to perform, and results are available within minutes. No electricity is needed since there is no centrifuging. These tests are just as accurate as the machine-read ELISA testing, and their use is increasing in Africa and throughout the world. Not many are yet available in Kenya, but they will become more readily available in the future. Rapid tests using oral mucosal samples are also becoming more and more accurate and will gradually become more available in Africa and in Kenya.

Whether the testing is done using machine-read ELISA tests or rapid tests, all positive results must be confirmed with a second test. This test should be different from the first test to reduce the chance of false results. Rapid tests can be confirmed immediately with a second, different rapid test.

Testing infants

The mother's antibodies pass through the placenta, and if a mother is HIV positive the baby will test positive because of the presence of the mother's antibodies, even if the baby is not infected with HIV.

The maternal antibodies start to disappear after the baby is 6 months old. Any time after that, the child may test negative, and this means that the child is not infected.

However, the mother's antibodies may remain up to 18 months. If a child tests positive before 18 months, you cannot be sure what it means, as it may reflect only the presence of the mother's antibodies and the child may not be infected. However, if the test is positive after 18 months of age, then it means that the child is infected.

It is possible to test for the HIV virus itself in young babies by more complicated and expensive tests such as PCR, P24 antigen testing or viral cultures. However, these tests are not reliable until a baby is at least 2 weeks old. These tests are not available in Kenya except in research settings.

When you counsel mothers soon after their babies are born, you assume that the babies are probably not infected. Only a small number of infants are infected with HIV at birth. It is difficult to know which ones they are, and at present we do not have specific treatment to offer them. If an infant is uninfected, it may be possible to reduce the risk of both HIV and other illnesses by appropriate counseling on infant feeding. So the best thing is to offer this help to all HIV+ mothers of newly born infants.

When testing is not available

HIV testing may not be available everywhere. A woman may be worried about HIV and aware of mother-to-child transmission, and in particular of transmission through breastfeeding. It is essential to advocate for availability of HIV testing to help reduce MTCT, and pregnant women who are very worried about HIV infection should be referred to a site where testing is available.

Clinical diagnostic criteria for HIV infection in children

Clinical criteria may be used to evaluate a child for HIV infection. These criteria were initially developed for surveillance purposes and therefore have limitations in identifying HIV-infected children, because most of the conditions that HIV-infected children manifest are also commonly seen in children uninfected with HIV.



Review the WHO diagnostic criteria with the participants.



WHO clinical case definition for paediatric HIV disease

Major criteria

- ⇒ weight loss or failure to thrive
- ⇒ diarrhoea for more than 1 month
- ⇒ fever for more than 1 month

Minor criteria

- ⇒ generalized lymphadenopathy
- ⇒ persistent or recurrent oral thrush
- ⇒ repeated common infections
- ⇒ cough for more than 1 month
- ⇒ generalized dermatitis
- ⇒ confirmed HIV infection in the mother

HIV infection should be suspected in a child with two major and two minor clinical features from the above list. The problem with the WHO clinical case definition for children is that other chronic problems may have clinical presentations similar to those listed above. It is important to think of HIV disease in a child who gets recurrent bacterial infections or fails to thrive despite adequate nutritional support.

If a mother does not know her HIV status, it is safer for her to breastfeed. When she is counseled about infant feeding, she needs reassurance that breastfeeding is the safest option for her. An exception could be if she has definite clinical AIDS.

In the previous unit we discussed the importance of voluntary counseling and HIV testing to identify women who are HIV positive, so that they can be offered help for their condition and to reduce the risk of mother-to-child transmission. Maternal and child health services are an entry point for VCT.

Some interventions to reduce mother-to-child transmission are advisable only for women who have been tested and know they are HIV positive. These include giving antiretroviral drugs in pregnancy and avoiding breastfeeding.

However, some practices that help to reduce MTCT can safely be provided for all women and do not require testing or identifying a woman as HIV positive. These practices include improved maternal nutrition, restricting the use of invasive obstetric procedures such as routine episiotomy, and good breastfeeding techniques to avoid the breasts becoming engorged, the nipples cracking, or mastitis.



Let us now consider all the places where practices to prevent MTCT need to be integrated into MCH care.

Integrating PMCT into MCH care

Health education

Health education for both men and women is important for primary prevention of HIV. It is the most important way to prevent their children from becoming infected. Prevention is particularly important for young women and for women during pregnancy and during lactation.

Health education should

- ⇒ provide information on HIV transmission
- ⇒ encourage safer sex practices and facilitate access to condoms
- ⇒ promote voluntary counseling and HIV testing for both men and women, especially before marriage and before pregnancy

Treatment of sexually transmitted infections

? Write key points of the clinical features of sexually transmitted infections (STIs) on a flip chart under the headings 'genital ulcer disease', 'genital discharge', 'lower abdominal pain', 'other STIs'. Ask the participants to name the clinical features and aetiology of STIs that fall under each of these sections. Refer to the Ministry of Health chart on the management of STIs.

Early diagnosis and treatment of sexually transmitted disease is important in preventing HIV transmission between adults. It may be necessary before, during or after pregnancy. Treatment of STIs during pregnancy may reduce the risk of transmitting infection to the infant. Routine syphilis testing of pregnant women is an essential component of good antenatal care, and all antenatal women should be tested for syphilis and treated if infected.

Asymptomatic infection is more common in women than in men. This is particularly true during pregnancy. In addition, women often do not recognize the symptoms associated with an STI. Therefore, at each antenatal visit women should be directly asked about any symptoms that might indicate STIs, such as lower abdominal pain, abnormal vaginal discharge or genital ulcers. If the facilities allow, a genital examination with appropriate laboratory investigation should be conducted for each woman at her first antenatal visit and at any time she reports complaints that suggest an STI.

If laboratory tests are not possible, a syndromic diagnosis can be made and treatment given using the Ministry of Health guidelines.



National STI syndromic management guidelines

1–3–1

1–3–2

Show transparencies and review the national STI syndromic management guidelines, syndrome by syndrome.

The key principles of STI management are


- ⇒ correct diagnosis
- ⇒ effective treatment
- ⇒ education on risk reduction and prevention
- ⇒ promotion and provision of condoms
- ⇒ partner notification and treatment

Family planning and protection against STDs

Condoms are an effective way to reduce the risk of sexual transmission of HIV. Condoms reduce the risk of becoming infected with HIV, particularly if they are used correctly all the time. Using condoms also reduces the risk of becoming infected with other STIs. Even women who are using oral, implantable or injectable contraceptives should be advised to use condoms with every sexual act. Pregnant women should also be encouraged to use condoms to prevent infection with STIs, including HIV. Condoms can be provided through family planning services, for both HIV-negative and HIV-positive men and women.

HIV-positive women need help to prevent unwanted pregnancies, and their needs should be addressed along with those of women who are HIV negative. Health-care staff should make adequate, accurate information available, but family-planning decisions should be completely voluntary.

The best method of contraception is one that will actually be used—correctly and consistently.

-  Ask the group to discuss the family planning options available to HIV-positive women. Explore with participants what they view as contraindications for using any particular contraceptive method. Write responses on a flip chart.

Family planning for the HIV-positive woman



1-3-3


1-3-4

There are no contraindications for an HIV-infected woman for using any of the available contraceptives. Women known to be infected with HIV may safely use IUDs if they have continued access to medical care and are in a stable, mutually monogamous relationship. However, women who are at risk of STIs, especially adolescents, should avoid using IUDs.

Suitable family planning methods need to be discussed with HIV-positive women who have chosen not to breastfeed. A non-lactating woman can become pregnant before her first menstrual period after childbirth. Using a reliable birth control method within 2 or 3 weeks of delivery is therefore highly recommended to avoid an unwanted pregnancy.

Back-up contraception is advisable if a woman is using certain medications, such as rifampin, or any anticonvulsant medication other than valproic acid; if she has severe diarrhoea; or if she is taking a broad-spectrum antibiotic such as ampicillin or tetracycline.

Antenatal care

-  Ask the participants to discuss what new services they should introduce in their antenatal clinics to help prevent MTCT of HIV.



Have them write their responses on a flip chart.

Routine antenatal care should include nutrition supplementation with iron, folic acid supplementation and vitamin A (not more than 20,000 IU).

Antenatal group education should include information about HIV, the importance of staying negative, and individual counseling and referral for VCT.

Information about benefits and management of breastfeeding should include individual infant feeding counseling for women who are worried about their HIV status or who know they are HIV positive. In some situations, a woman may be offered antiretroviral drugs to take at the end of pregnancy and at the time of delivery.

Delivery and postpartum care



Ask the participants to indicate ways in which they can modify their delivery practices and postnatal care to help prevent MTCT of HIV.



Write responses on a flip chart.

During delivery all women need

- ⇒ a skilled attendant present
- ⇒ minimal use of invasive procedures, such as episiotomy
- ⇒ their health worker to use universal precautions



Universal precautions

1-3-5

1-3-6

1-3-7

Universal precautions are protective measures taken to ensure that no pathogens are transmitted through body fluids from patient to patient, patient to health worker, or health worker to patient. These protective measures should be applied universally to all patients. Their body fluids and discharges should all be treated with the assumption that they are potentially infected.

Postpartum care for the mother

After giving birth, all women need general postpartum care, including good nutritional support. A detailed discussion on maternal nutrition is undertaken in module 2 unit 2, 'Antenatal preparation for lactation'.

Women who are HIV positive and not breastfeeding need advice and support for alternative feeding from birth. They may need help while their milk supply is drying up. They need family planning advice early. Women who are HIV negative or untested need support to prevent HIV and encouragement and support to breastfeed exclusively, using good technique. A woman who has an HIV test while in hospital needs counseling before and after the test. If positive,

she needs time to discuss and consider her infant feeding options.

A detailed discussion of this topic is undertaken in module 3 unit 3, 'Infant-feeding choices for the HIV-infected mother'.

Care of the HIV-infected woman

Women identified to be HIV infected during pregnancy will need ongoing care and support.



Needs of the HIV-infected woman

1-3-8

Health workers need to have a holistic approach to caring for HIV-positive

1-3-9

women. They will need to involve other professionals to get the best care possible for their clients. Important areas that need to be addressed when caring for HIV-infected women include

- ⇒ emotional and psychological support through ongoing counseling
- ⇒ adequate nutrition
- ⇒ adequate rest
- ⇒ prompt medical attention for illness
- ⇒ a positive mental attitude
- ⇒ support in dealing with stigma
- ⇒ planning for the future
- ⇒ legal support

These women may need medical intervention to improve their quality of life and prolong their survival. Interventions might include prophylaxis against opportunistic infections. HIV-infected women who have suffered from several infections or who have clinical AIDS may benefit from prophylaxis with cotrimoxazole (Septrin). Likewise, HIV-infected women who have a positive tuberculin test with no evidence of active tuberculosis may benefit from prophylaxis with isoniazid.

Another intervention might be immunization. HIV-infected individuals may benefit from immunization with some of the vaccines that are not yet in the EPI (extended programme of immunization) schedule, such as *Haemophilus influenzae* type B vaccine (HiB).

Combinations of antiretroviral drugs have also been demonstrated to improve the survival of HIV-infected individuals. Their main limitations are their cost and the side effects they cause. Most women in sub-Saharan Africa do not have access to these medications. It is important to note that antiretroviral drugs used in pregnancy to prevent MTCT do not treat the mother.

Tuberculosis

In the context of the dual epidemic of tuberculosis and HIV, it is becoming increasingly common to see tuberculosis in women attending MCH clinics.

A person infected with HIV is 10 times more likely to develop TB than a person who is HIV negative. HIV seroprevalence among TB patients in sub-Saharan Africa may be as much as 70%.



1-3-10

Diagnosis

A diagnosis of tuberculosis should be considered in any woman presenting to the MCH services with

- ⇒ cough that has lasted longer than 3 weeks
- ⇒ sputum production
- ⇒ weight loss

Additional signs that suggest TB include

- ⇒ fever and night sweats
- ⇒ haemoptysis
- ⇒ chest pain
- ⇒ breathlessness

All patients with clinically suspected tuberculosis should submit three samples of sputum for microscopy and should have a chest x-ray taken and a tuberculin test done.

Note: No chest x-ray pattern is absolutely typical of TB.

Treatment of people proven to have tuberculosis should be guided by the recommended regimens of the National Tuberculosis Control Programme.



Summary

1-3-11

Practices to prevent MTCT should be part of general care. Integrated care will not only help HIV-positive mothers receive the care they need, it will help to promote good health among mothers who are HIV negative.

In this session, we discussed

- ⇒ providing information, encouraging voluntary HIV testing
- ⇒ integrating into existing MCH services the strategies for preventing MTCT of HIV
- ⇒ giving HIV-infected women family planning options
- ⇒ planning care for the HIV-infected woman
- ⇒ detecting and treating tuberculosis



Practical session

Divide the class into two groups.

Have Group 1 participants develop a checklist for evaluating the use of universal precautions in the labour ward. Have this checklist typed and use it to evaluate the practice of universal precautions in a labour ward in a practical session.

Have Group 2 participants prepare a role-play on counseling an HIV-positive woman about family planning. (See instructions about role-plays in module 4 unit 5, 'Counseling on safer sex'.

The assignment should take each group 30 minutes for preparation, 5 minutes for presentation and 5 minutes for discussion.

NATIONAL STI SYNDROMIC MANAGEMENT GUIDELINES

FIGHT AIDS!**REMEMBER THE 4Cs OF
GOOD STI MANAGEMENT****C**OUNSELLING

- empathize with your patient (put yourself in your patient's place)
- dialogue with your patient
- discuss the other 3Cs

COMPLIANCE

- Your patient should
- avoid self-medication
 - take the full course of medication and not share or keep it
 - follow your other instructions

CONDOMS

- proper condom use is the only alternative to abstinence
- give condoms to your patient
- explain and demonstrate the proper use of condoms

CONTACT TREATMENT

- Your patient should
- tell all his/her sexual partners to seek medical attention



REPUBLIC OF KENYA

**MANAGEMENT OF
SEXUALLY
TRANSMITTED
INFECTIONS
(STIs)**

NATIONAL AIDS/STD CONTROL
PROGRAMME (NASCO)
MINISTRY OF HEALTH
P.O.BOX 19361, NAIROBI

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MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

THE CHART PRESENTS THE MOST COMMON STI SYNDROMES AND TREATMENTS; FOR MORE INFORMATION CONSULT THE NATIONAL GUIDELINES FOR CONTROL OF STI



Urethral discharge

Urethritis, usually caused by gonorrhoea and chlamydia

EXAMINE FOR DISCHARGE

DISCHARGE PRESENT → DISCHARGE ABSENT

URETHRITIS R_x AND 4Cs

SYMPTOMATIC R_x

IF DISCHARGE PERSISTS AFTER 7 DAYS

Alternative
URETHRITIS R_x and 4Cs

IF DISCHARGE PERSISTS AFTER 7 DAYS

REFER FOR INVESTIGATION

URETHRITIS R_x

Norfloxacin 800 mg stst OR
Spectinomycin 2g IM
AND
Doxycycline 100 mg BD x 7 days

Alternative R_x

Amoxycillin 3.5 g and Probenicid 1 g
AND Augmentin 1 tab
AND
Doxycycline 100 mg BD x 7 days



Vaginal discharge or pruritus

Vaginitis, usually caused by candida and trichomonas. Cervicitis, usually caused by gonorrhoea

ENQUIRE ABOUT LOWER ABDOMINAL PAIN AND
EXAMINE FOR ABDOMINAL TENDERNESS

NO LOWER ABDOMINAL PAIN
OR TENDERNESS

LOWER ABDOMINAL PAIN
OR TENDERNESS

VAGINITIS R_x AND 4Cs

FOLLOW THE FLOWCHART
FOR LOWER
ABDOMINAL PAIN

IF NO IMPROVEMENT AFTER 7 DAYS

CERVICITIS R_x and 4Cs

IF DISCHARGE PERSISTS AFTER 7 DAYS

REFER FOR INVESTIGATION

CERVICITIS R_x

Norfloxacin 800 mg stat
AND
Doxycycline 100 mg
BD x 7 days

If pregnant

Amoxycillin 3.5 g AND
Probenicid 1 g
AND Augmentin 1 tab
AND
Erythromycin 500 mg
QID x 7 days
OR
Spectinomycin 2 g IM
and
Erythromycin 500 mg
QID x 7 days



Lower abdominal pain in women

PID, caused by gonorrhoea, chlamydia and anaerobes. Surgical and obstetrical conditions

DO ABDOMINAL & BIMANUAL EXAMINATIONS

ABDOMINAL
TENDERNESS
DUE TO SURGICAL OR
GYNAECOLOGICAL
CAUSES

ABDOMINAL
TENDERNESS OR
TENDERNESS ON
MOVING THE
CERVIX

NO TENDERNESS
ON ABDOMINAL
EXAMINATION

REFER FOR
SURGICAL
OR
GYNAECOLOGICAL
ASSESSMENT

SYMPTOMATIC R_x
OR VAGINITIS R_x
IF THERE IS
VAGINAL DISCHARGE

PID R_x AND 4Cs

IF NO IMPROVEMENT AFTER 7 DAYS

REFER FOR
INVESTIGATIONS

START FLOWCHART
AGAIN AFTER
REPEATING
ABDOMINAL
EXAMINATION

Surgical or gynaecological causes are determined by rebound tenderness and/or guarding: last menstrual period overdue: recent abortion or deliver: menorrhagia or metrorrhagia

PELVIC INFLAMMATORY DISEASE (PID) R_x

Norfloxacin 800 mg stat
AND
Doxycycline 100 mg BD x 7 days
AND
Metronidazole 400 mg BD x 10 days

If pregnant

Refer for obstetric evaluation if PID is suspected



Genital ulcer disease (GUD)

GUD, usually caused by chancroid, syphilis and herpes genitals

EXAMINE FOR ULCER

MULTIPLE VESICLES GROUPED
TOGETHER WITH A HISTORY OF
RECURRENCE (HERPES GENITAL S)

OTHER GUD

SYMPTOMATIC R_x and 4Cs

GUD R_x AND 4Cs

IF NO IMPROVEMENT AFTER 7 DAYS

FOLLOW OTHER
GUD COLUMN

ALTERNATE GUD R_x AND 4Cs

IF NO IMPROVEMENT AFTER 7 DAYS

REFER FOR INVESTIGATION

GUD heals slowly. Improvement is defined as signs of healing and reduction of pain. People with HIV infection will be slower in responding to GUD treatment

GENITAL ULCER DISEASE (GUD) R_x

Erythromycin 500 mg TID x 7 days
and
Benzathine Penicillin 2.4 MU IM stat
if Penicillin allergy, use
Erythromycin 500 mg qid x 14 days

ALTERNATIVE R_x

Ciprofloxacin 500 mg stst
OR
Ceftriaxone 250 mg IM

National STI syndromic management guidelines

FIGHT AIDS!

REMEMBER THE 4Cs OF GOOD STI MANAGEMENT

COUNSELLING

- empathize with your patient (put yourself in your patient's place)
- dialogue with your patient
- discuss the other 3Cs

COMPLIANCE

- avoid self-medication
- take the full course of medication and not share or keep it
- follow your other instructions

CONDOMS

- proper condom use is the only alternative to abstinence
- give condoms to your patient
- explain and demonstrate the proper use of condoms

CONTACT TREATMENT

- CONTACT TREATMENT**
- Your patient should
- tell all his/her sexual partners to seek medical attention



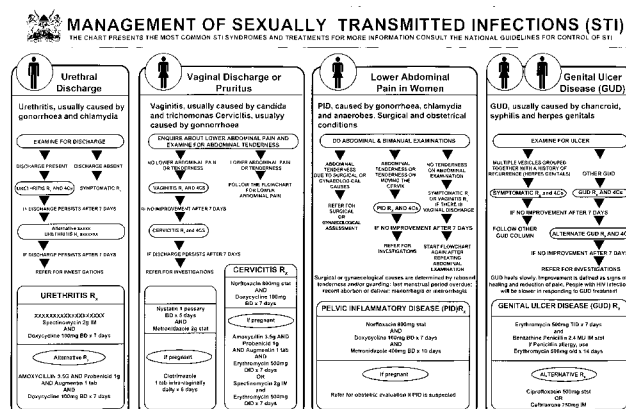
REPUBLIC OF KENYA.

MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS (STIs)

NATIONAL AIDS/STD CONTROL
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P.O. BOX 19961, NAIROBI

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1-3-1



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1-3-2

Family planning for the HIV-positive woman

- ◆ The aim is to prevent unwanted pregnancies.
- ◆ There are no contraindications for any commercially available contraceptive.
- ◆ Women at increased risk of STIs, especially adolescents, should avoid IUDs.

1-3-3

Family planning . . .

- ◆ Non-lactating women should use a reliable birth control method within 2 or 3 weeks of delivery to avoid an unwanted pregnancy.
- ◆ Back-up contraception should be given to women on hormonal contraceptives who are being treated with rifampin, anticonvulsant drugs or broad-spectrum antibiotics.

1-3-4

Universal precautions . . .

- ◆ Reduce needle-stick injuries.
- ◆ Wash hands with soap and water immediately after contact with blood or body fluids.
- ◆ Wear latex gloves when expecting exposure to blood or body fluids.
- ◆ Cover broken skin or open wounds with watertight dressings.

1-3-5

Universal precautions . . .

- ◆ Wear suitable protective apron and eye shield during delivery.
- ◆ Cut the cord under the cover of a lightly wrapped gauze swab.
- ◆ Dispose of blood-soaked dressings and placentas safely.
- ◆ Use disinfectant solution to clean infectious spills.

1-3-6

Universal precautions . . .

- ◆ Dispose of needles, surgical blades and other sharp instruments safely.
- ◆ Handle unsterilized instruments carefully.
- ◆ Educate health workers about procedures for avoiding accidental HIV exposure in the workplace.

1-3-7

Needs of the HIV-infected woman

- ◆ Ongoing emotional and psychological support
- ◆ Adequate nutrition
- ◆ Regular moderate exercise
- ◆ Adequate rest
- ◆ Avoidance of smoking or excessive ingestion of alcohol

1-3-8

Needs . . .

- ◆ Prompt medical attention for illness
- ◆ Medical interventions for prophylaxis and treatment
- ◆ A positive mental attitude
- ◆ Plans for the future
- ◆ Legal support

1-3-9

Tuberculosis: diagnosis

- ◆ Cough that has lasted over 3 weeks
- ◆ Sputum production
- ◆ Weight loss
- ◆ Fever and night sweats
- ◆ Haemoptysis
- ◆ Chest pain
- ◆ Breathlessness

1-3-10

Summary: integration

Integrating services means—

- ◆ Providing information and encouraging voluntary HIV testing for all women
- ◆ Integrating into existing MCH services the strategies for preventing MTCT of HIV
- ◆ Providing HIV-infected women with family planning counseling and options
- ◆ Caring for HIV-infected women
- ◆ Detecting and treating tuberculosis

1-3-11

Unit 4

Care of children born to HIV-infected mothers

by
Dr Dorothy Mbori-Ngacha
with
Dr Ruth Nduati

4


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Care of children born to HIV-infected mothers

Introduction

Children born to HIV-infected women have special needs either because their mothers are frequently unwell or because they are actually infected themselves. They are at a greater risk for illnesses and malnutrition than those born to HIV-negative women. The majority of these children are not infected with HIV. The participants will be expected to acquire knowledge of total care of children irrespective of their HIV status and to provide ongoing support to the family of HIV-exposed children.

 Start by **discussing** with participants what they understand by total care.

Total care includes promotive health-care management of infections and use of anti-retroviral therapy. Promotive care can be categorized into prevention of infection and psychosocial support. Strategies for preventing infections include good hygiene, immunizations, antibiotic prophylaxis and good nutrition.

Promotive care

?

The first step in the care of HIV-exposed children is to have a positive attitude towards them. What can health workers do to avoid having a negative attitude towards these children?

Let participants give suggestions and list on a flip chart or a board.

Perinatal care

It is important to recognize that this is a period of high risk for mother-to-child transmission of HIV. Mother-to-child transmission can be minimized:

- Avoid unnecessary artificial rupture of membranes.
- Avoid injuring the baby's skin or mucous membranes by avoiding
 - ⇒ birth trauma
 - ⇒ asphyxia
 - ⇒ naso-oro-pharyngeal suction
- Minimize the contact a baby has with maternal secretions by
 - ⇒ promptly clearing mucus and blood from the baby's face
 - ⇒ handling the cord in a way to minimize maternal–foetal transfusion (no milking before cutting, promptly tying the cord and using antiseptics to clean the cord until it heals completely)
- Providing the newborn with appropriate care that includes
 - ⇒ keeping the baby warm with particular attention to the low-birth-weight baby
 - ⇒ using feeding methods appropriate for age and maturity, for example, tube or cup feeding for preterm baby
- Prevent infection by
 - ⇒ avoiding separating mother and baby
 - ⇒ counseling mothers on personal hygiene
 - ⇒ ensuring that health workers wash their hands between handling babies
 - ⇒ avoiding crowding and sharing of cots
 - ⇒ using clean equipment and utensils

Apply tetracycline eye ointment within half an hour of birth to prevent ophthalmia neonatorum.

Newborn babies are very vulnerable to infections. It is important that the health worker and the mother recognize key symptoms of illness in the newborn.



Watch out for danger signs

- ⇒ lethargy, irritability, convulsions
- ⇒ respiratory distress
- ⇒ prematurity and low birth weight
- ⇒ jaundice
- ⇒ refusal to feed
- ⇒ dehydration

If a baby has any of these conditions, refer or treat quickly to minimize morbidity and mortality.

Feeding and growth monitoring and promotion are critical for the wellbeing of the baby. These topics will be discussed in detail in module 3 unit 3 ‘Infant feeding choices’ and unit 5, ‘Growth monitoring’.

Immunizations



- Ask if any participant has gone through training in the Kenya expanded programme of immunization (KEPI).
- Ask participants to mention available vaccines.
- What is recommended for children born to HIV-infected women?
 - ⇒ follow the KEPI schedule for hepatitis B, *H. influenzae*, MMR (measles, mumps, rubella), yellow fever
 - ⇒ other vaccines—follow recommended schedule
- What is the response to vaccinations of HIV-infected children?

- Are any vaccines contraindicated?
 - ⇒ if a child is exposed to HIV (mother is HIV positive) do not repeat BCG for non-responders, refer to a senior doctor
 - ⇒ give oral polio vaccination according to schedule
- What do you do if child is sick but immunization is due?
 - ⇒ mild illness—vaccinate
 - ⇒ severe illness—vaccinate on discharge from ward

Children of HIV-infected women should be immunized according to the KEPI schedule.

PMCT TRAINING CURRICULUM



Module 2

MATERNAL NUTRITION AND PREPARATION FOR BREASTFEEDING

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Module 2

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Unit 1

Maternal nutrition

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Maternal nutrition

↓ Introduction

A well-nourished woman is likely to be in good health. Consequently she is able to look after the family well. When she is pregnant, the outcome of her pregnancy is likely to be favourable and her lactation performance is enhanced.



2-1-1

🎯 Objective

By the end of this unit, the participant should be able to promote adequate maternal nutrition and to recognize and manage nutritional deficiencies.

Introduce the topic through these statements.

In the context of reproductive health, the woman is looked on as the

- ⇒ carrier of the foetus
- ⇒ deliverer of the baby
- ⇒ feeder of the child

Rarely do we consider the woman as a human being with her own individual needs and as a result maternal nutrition is a relatively neglected topic. The need for adequate nutrition starts at conception and goes through childhood and adolescence to adulthood.

Neglect of childhood nutrition leads to a stunted adult. For a woman to have a good outcome of her pregnancy, she needs to enter it when she is adequately nourished.

Nutritional deficiencies, such as anaemia and vitamin A deficiency, are associated with mother-to-child transmission. Maternal malnutrition is also associated with preterm delivery, a factor that significantly increases the risk of HIV infection in the infant. Therefore, maternal nutrition during pregnancy and lactation is of considerable importance in preventing mother-to-child transmission of HIV.

Promotion of good maternal nutrition

- ☹ Discuss the nutritional requirements through the different stages of a woman's life.

The essential components of a balanced diet are

- ⇒ protein
- ⇒ energy
- ⇒ minerals
- ⇒ micronutrients

These nutrient requirements are essential to maintain

- ⇒ basal metabolic rate
- ⇒ physical activity
- ⇒ growth

Diet should compensate for ongoing loss such as loss of iron during menstruation.

The nutritional requirements differ during various stages of a girl's life:

- **Girl-child:** This is a stage of rapid growth and therefore the requirements for all nutrients increase.
- **Adolescent:** This stage is characterized by a growth spurt and onset of maturation; nutritional demands are high.
- **Non-pregnant, non-lactating woman:** Requirements for iron are ongoing to accommodate monthly loss through menstruation.
- **Pregnant woman:** During a normal pregnancy, a woman gains 10 to 12 kg. This weight includes the baby, placenta, amniotic fluid and subcutaneous fat.
- **Lactating woman:** Breastfeeding is a metabolically active process. Women require the equivalent of a whole extra meal per day to accommodate lactation. Under normal circumstances, the energy needs of lactation are accommodated by improved metabolic efficiency, increased nutrient intake, and breakdown of subcutaneous fat. If nutritional intake during pregnancy and lactation is inadequate, foetal growth and milk production go on at the expense of the woman's own nutritional status.

? What factors affect a woman's nutrition?



2-1-2

Factors affecting maternal nutrition

Nutrient intake

Beliefs and culture

Different cultures have different belief systems about the foods pregnant and lactating women should eat. Often, nutritious protein foods are excluded from the diet. Familiarize yourself with the food taboos in the community you serve so that you are able to address them during health education and counseling.

Cravings

During pregnancy, women experience strong cravings for certain foods or non-food material such as soil or stones. These cravings are often due to deficiency of essential micronutrients. The pregnant woman should be counseled on how to ensure she is eating a balanced diet within the resources available to her. She should be discouraged from eating soil or stones because of the risk of intestinal parasites.

Heavy workload

A heavy workload requires a lot of energy calories. Light work carried out for a long time also requires considerable amounts of calories. In a normal pregnancy, physiological adjustments include improved efficiency of metabolism and reduced physical activity. However, if a woman's diet is only marginally nutritious, the competing needs of physical work and pregnancy contribute significantly to nutritional depletion and increase her chance of delivering a low-birth-weight infant.

Physical exercise

Physical exercise with adequate nutritional intake does not adversely affect the woman's health status. However, excessive exercise and physical work with inadequate nutritional intake increase the risk of a low-birth-weight infant.

Body image

Pregnancy and lactation changes a woman's shape. Some women are unable to accept these changes and try to diet during this period in an effort to maintain their shape. The dieting may lead to inadequate nutritional intake.

Addictive drugs

? What are the effects of addictive drugs on the foetus?

Alcohol

Alcohol intake during pregnancy may lead to foetal alcohol syndrome. The risk is not dose related and any amount may pose a risk to the foetus. In heavy drinkers, the baby may be born with abnormalities of the eyes, nose, heart and central nervous system that may include growth retardation and mental retardation. Moderate drinkers may also have babies with foetal alcohol syndrome. They also tend to have a higher rate of spontaneous abortion and low-birth-weight delivery. 'Possible foetal alcohol syndrome' is a term used for children with learning and behavioural disorders who were exposed to alcohol during the foetal stage but do not have the physical features seen in babies exposed to heavy or moderate alcohol intake.

Tobacco

Smoking doubles the risk of low birth weight. This risk is higher for women over 35 than for younger women. On average, babies of smokers weigh 200 g less than babies of non-smokers. It is not clear whether smoking causes congenital malformation but it does cause serious pregnancy complications that include

- ⇒ bleeding during pregnancy
- ⇒ premature rupture of membranes
- ⇒ prolonged rupture of membranes
- ⇒ preterm delivery

Young infants who are exposed to smoke, including cigarette smoking, are at increased risk of acute respiratory infections and deterioration into an asthmatic condition.

Marijuana

Children exposed to marijuana in the foetal stages have

- ⇒ disturbed sleep patterns
- ⇒ intellectual deficiency, especially in short-term memory and in verbal and abstract reasoning

These defects persist beyond early childhood and are observed in school-age children.

Caffeine

There is evidence to suggest that heavy consumption of caffeine increases the risk of spontaneous abortion. Caffeine is present in beverages such as tea and coffee and therefore they should be drunk in moderation.

- ☹️ Ask the participants to discuss the commonest drugs of addiction in their population. Which populations of pregnant women use these drugs?



2-1-3



Indicators of adequate nutrition

The many factors considered to be indicators of adequate nutrition include

- ⇒ birth weight
- ⇒ mother's weight
- ⇒ mother's height
- ⇒ mother's body mass index
- ⇒ mid-arm circumference
- ⇒ absolute weight gain in pregnancy
- ⇒ rate of weight gain
- ⇒ weight loss during lactation
- ⇒ anaemia

Each of these factors is an indicator of different aspects of nutrition.

Infant birth weight



What factors affect the infant's birth weight?

Maternal nutrition during pregnancy and lactation is often discussed from the point of view of infant birth weight. Maternal nutritional factors that affect birth weight include both long-term and short-term indicators of good nutrition.



Discuss the prevalence of low birth weight in Kenya. How do we measure low birth weight? How feasible is it to do so?

Mother's height

Height is a measure of skeletal growth. Taller women have heavier babies than do shorter women. Short stature is often the result of chronic food shortage during childhood. The likelihood of having a contracted pelvis is greater in short women, and with it is a higher risk of obstructed labour, requiring operative delivery.

Mother's prepregnancy weight

Low prepregnancy weight is associated with low birth weight. Adequate maternal nutritional intake during pregnancy does not diminish the birth-weight disadvantage conferred by short stature and low prepregnancy weight. However, adequate nutritional intake is important for the mother's own well-being.

Body mass index

Body mass index (BMI), a composite measure of weight and height ($\text{BMI} = \text{weight in kilograms} / \text{height}^2 \text{ in metres}$). For example, a woman who is 1.6 metres tall and weighs 55 kg has a BMI of 55 divided by the square of 1.6; this gives a BMI of 21.5. BMI is a reasonable indicator of current nutritional status.

Women with BMI less than 18 are classified as being severely energy depleted, 18 to 21 as moderately depleted while over 21 is considered adequate nutritional status. BMI changes considerably during pregnancy and is difficult to interpret but it is a useful measure of nutritional status during lactation and in the non-pregnant state.

Mid-upper-arm circumference

The mid-upper-arm circumference (MUAC) is measured using a non-stretch tape. To ensure standard practice, MUAC is measured on the left arm. As MUAC does not change appreciably during pregnancy, it is a more stable measurement than BMI. MUAC is a good measure of the body's muscle mass and therefore a good indicator of body protein.

Weight gain during pregnancy

Weight gain during pregnancy is an indicator of the mother's nutritional status during pregnancy. The weight gain is due to the products of conception and maternal fat stores. The fat stores laid down during pregnancy are used as a source of energy during periods of rapid infant growth in late pregnancy and energy for labour and lactation. Table 2.1.1 outlines the distribution of weight gain during pregnancy.



2-1-4

Table 2.1.1
Average weight of the products of pregnancy

Product	Weight (kg)
Foetus	3.0
Placenta	0.4
Amniotic fluid	0.8
Uterus (weight increase)	1.1
Breast tissue (weight increase)	1.4
Blood volume (weight increase)	1.8 (1500 ml)
Maternal fat stores	1.8–3.6
Total	10.3–13.9

Recommended weight gain during pregnancy

Recommended weight gain is based on a woman's prepregnancy weight (see table 2.1.2). During pregnancy the nutritional status can be monitored by rate of weight gain. In the first trimester a woman should gain 1 to 3 kg. Thereafter the weight gain should be approximately 1 kg a week for the remainder of the

pregnancy. A higher weight gain is not normal and is associated with pregnancy complications such as pre-eclampsia and diabetes. Such a mother requires other evaluation.

Table 2.1.2
Recommended weight gain during pregnancy

Pregnancy state	Recommended gain (kg)
<i>If prepregnancy weight was—</i>	
Normal	11.5–18.0
Underweight	12.5–18.0
Overweight	7.0–11.5
Twin pregnancy	16.0–20.5
Adolescent pregnancy	upper end of recommended values for women

Pregnancy weight gain among Kenyan women

A number of studies have examined the pregnancy weight gain among Kenyan women and found that their weight gain is usually inadequate. The average weight gain is 6 to 7 kg, and a large proportion of women lose weight in the third trimester. Women with the lowest weight gain have smaller babies at birth.

Nutritional requirements during lactation and the postnatal period

? How does maternal nutrition affect lactation performance?

Lactation is a metabolically expensive process requiring an additional 600–700 kcal every 24 hours. The energy requirements are highest during exclusive breastfeeding when milk production is maximal. This energy amount is equivalent to an extra meal per day. Lactating women meet these requirements by

- ⇒ increasing their nutritional intake
- ⇒ the body improving the efficiency of its metabolism
- ⇒ the body using the energy it has stored during pregnancy
- ⇒ decreasing their level of physical activity

These physiological mechanisms allow women to make adequate amounts of milk across a wide range of conditions affecting maternal nutrition. During periods of adequate nutrition the most important source of energy is the daily nutritional intake. When the nutritional intake is inadequate, the body uses its nutritional stores to maintain breast-milk production. Poorly nourished women do not have the energy resources as a safety mechanism, and as a result their milk production declines. A number of studies have documented the decline in breast-milk production of malnourished women during the preharvest season when food supplies are inadequate.

For the mother, the postnatal period is a period of involution. Well-nourished women lose 0.4 to 0.8 kg a month for the first 6 months and then lose more slowly. Poorly nourished women whose weight during pregnancy has been inadequate gain weight during lactation to make up for the inadequate intake during pregnancy. Preliminary observations indicate that breastfeeding increases the likelihood of dying for HIV-infected women with advanced disease. It is thought that this could be due to nutritional depletion by breastfeeding and from the HIV disease. Promoting good nutrition in the lactating woman is, therefore, of benefit to both the mother and her baby.

Inadequate nutritional intake by the mother may result in

⇒ early onset of infant stunting

⇒ early weaning

Babies who are stunted or are weaned too early have a high likelihood of dying from malnutrition.

Indicators of adequate micronutrient intake during pregnancy and lactation

Micronutrients are essential for good health. Requirements for them increase during pregnancy and lactation. In this section, we discuss

⇒ vitamin deficiencies

⇒ mineral deficiencies

⇒ trace elements

Highlight the following points to emphasize the importance of micronutrients in health.

Micronutrient deficiencies have a direct impact on the health of pregnant women, including HIV-infected women. Anaemia increases the likelihood for a woman to transmit HIV infection to her infant. Anaemic pregnant women may require a blood transfusion, thus putting them at risk of HIV infection. Women who are anaemic during pregnancy increase by sixfold their chance of dying in the year after a delivery. The common causes of nutritional anaemia are deficiencies in iron, folic acid and vitamin B12. Therefore, preventing anaemia is important for the health of both HIV-infected and uninfected women.

Supplementing the diet of HIV-uninfected pregnant women with vitamin A reduces mortality. Similarly, vitamin A supplementation reduces mortality of HIV-infected and uninfected children. In HIV-infected women, vitamin A deficiency is associated with increased MTCT of HIV.

Here we highlight the key micronutrients. The learner should review textbooks of medicine for a more comprehensive discussion.

Mineral micronutrients



2-1-5



Most of the body's calcium and phosphorus is found in the bones and teeth. Pregnancy increases the requirements for these elements, to mineralize the foetal skeleton and deciduous teeth. The requirements are maximal during the third trimester, when foetal bone growth is the most rapid.

Calcium

The recommended daily allowance for calcium is 400 to 800 mg.

Sources of calcium

The main sources of dietary calcium are

⇒ milk and milk products

⇒ dark leafy vegetables such as spinach, collard greens (sukuma wiki)
amaranth (terere), millet and sorghum

⇒ bone soups

Calcium absorption in the gut improves during pregnancy to accommodate the increased physiological requirements.

It is estimated that the foetus draws 13 mg of calcium an hour, or 250–300 mg a day. Evidence from randomized clinical trials suggests that

⇒ women with low calcium intake increase their risk of hypertension, oedema and pre-eclampsia

⇒ supplementation with calcium after 20 weeks of gestation lowers blood pressure and reduces the possibility of preterm delivery

Deficient calcium intake

Inadequate calcium intake manifests with

⇒ softening of the bones (bone demineralization)

⇒ body swelling, loss of protein in the urine, and elevated blood pressure

⇒ increased likelihood of pregnancy-related high blood pressure (pre-eclampsia)

Phosphorus

Recommended phosphorus intake

- The normal recommended intake of phosphorus is 400 mg per day. During pregnancy women should take an additional 400 mg daily for a total of 800 mg per day.
- Women should avoid foods high in phosphorus and low in calcium such as sodas and other carbonated drinks.

Sources of phosphorus

Processed foods with the exception of milk products are high in phosphorus and low in calcium.

Phosphorus is in a constant ratio with calcium in blood. This ratio can be disturbed by the food intake. Excess phosphorus intake binds calcium and prevents the gut from absorbing it.

A high phosphorus-to-calcium ratio in blood increases the loss of calcium in bone. During pregnancy lowered calcium levels and the mild alkalosis caused by reduced maternal CO₂ increase muscle irritability, leading to a tendency towards cramps. This predisposition is accelerated by a high phosphorus and low calcium intake. The cramps may be relieved by increasing milk intake, as milk is high and calcium and phosphate, or by taking non-phosphate calcium salts.

Magnesium

Magnesium is found in bone, bound to calcium and phosphorus. Not enough is known about its effect on pregnancy. A number of studies show that higher magnesium intake is associated with a lower incidence of pregnancy-related muscle cramps.

Sources of magnesium include

- ⇒ leafy green vegetables
- ⇒ nuts
- ⇒ wheat bran
- ⇒ soy bean
- ⇒ wheat germ

Animal products and fruits are poor sources of magnesium.

Iodine

Iodine deficiency is the leading cause worldwide of mental retardation. In the past iodine deficiency was prevalent in Kenya. The use of iodized salt has to a certain extent reduced the prevalence. However in many communities, because iodized salt is expensive the tendency is to use the cheaper salt for animals that is not iodized.

Sources of iodine

Iodized salt is the best source of iodine. The salt needs to be stored in a dark

container to retain adequate amounts of iodination. High concentrations of flavenoids in the diet interfere with the absorption of iodine. Foods that contain large amounts of flavenoids include cassava.

Excess iodine intake in pregnancy may be harmful to the foetus. Women on iodine-containing drugs for treatment of asthma and thyroid disorders are at increased risk of exposing their foetus to excessive iodine.

Iodine deficiency

Manifestation of severe iodine deficiency includes

- ⇒ mental retardation
- ⇒ deafness
- ⇒ motor rigidity
- ⇒ poor attention span leading to impaired learning
- ⇒ hypothyroidism

These conditions are most frequently found where the prevalence of goitre is over 30%. Pregnant women with hypothyroidism have increased incidence of

- ⇒ stillbirths
- ⇒ cretinism in the infant
- ⇒ mild motor and cognitive defects in the infant

Iodine supplementation

Adding iodine supplementation to the diet before pregnancy reduces the risk of cretinism more than does supplementation during pregnancy.

Iron

Iron is essential for producing haemoglobin. The adequacy of iron intake is assessed by measuring the haemoglobin level. The total amount of iron required for the whole duration of a pregnancy is 670 mg. This iron is distributed as follows:

foetus	246 mg (range 200–370 mg)
placenta	134 mg (range 30–170 mg)
expanded maternal blood volume	290 mg (range 90–800 mg)
total	670 mg (range 310–880 mg)

The consequences of iron-deficiency anaemia can be classified into maternal and foetal outcomes.

- Maternal outcomes include heavy bleeding (haemorrhage) during pregnancy and delivery and puerperal infections.
- Foetal outcomes include prematurity, low birth weight, and increased risk of anaemia. Preterm babies are at high risk of acquiring HIV infection from their mothers. Iron supplementation is an inexpensive way of reducing this risk.

In the last trimester of pregnancy, when iron is actively transferred across the placenta, the foetus is a virtual parasite in acquiring iron from the mother. Iron deficiency in the newborn is a feature of babies who are born prematurely, because the baby has not had enough time to accumulate iron in the body. The iron-deficiency anaemia manifests itself by the age of 3 months. Preterm babies require iron supplementation to prevent iron-deficiency anaemia.

Many women begin pregnancy with inadequate iron stores. They continue to take in inadequate amounts of iron-rich foods; hence they need supplements.

A diagnosis of anaemia is made if haemoglobin levels are less than 11.0 g/dl or the haematocrit is under 33% in the first and third trimester. During the 2nd trimester a haemoglobin of less than 10.5 g/dl or a haematocrit of under 32% is diagnostic of anaemia.

Dose for iron supplementation

The recommended dose for iron supplementation during pregnancy and lactation is 300 mg of ferrous sulphate once a day. Oral iron may cause acute gastritis, and many women are unable to tolerate a daily dose of iron therapy. The same dose administered three times a week has been found to provide adequate amounts of iron for the pregnant woman.



2-1-6

Vitamin intake during pregnancy

Vitamins

Adequate vitamin intake during pregnancy is essential. We will now consider the different groups of vitamins.

Thiamin, niacin and riboflavin

The vitamins thiamin, niacin and riboflavin are important coenzymes in different metabolic processes that generate energy. Pregnancy is characterized by increased energy requirements. Therefore, consumption of these vitamins needs to be increased. Good sources are milk and milk products, lean meat and leafy green vegetables.

Folic acid

Folic acid is essential in synthesizing RNA, an important component of cell cytoplasm, and of DNA, the key component of the cell nucleus. Folic acid is also critical for manufacturing non-essential amino acids. These processes are essential for the body to produce new cells.

Folic acid is deficient if dietary intake is inadequate or when body demand increases. Conditions that increase the breakdown of red cells such as malaria and abnormalities of the red cell such as sickle-cell anaemia increase the requirements for folic acid. Persons with these condition are at increased risk of deficiency.

- Folic acid deficiency causes megaloblastic anaemia.
- Folic acid deficiency in pregnancy increases the frequency of neural tube defects (anencephaly and spinal bifida). Preconception supplementation with folate reduces the incidence of neural tube defects by 70%.

Sources of folic acid

Good sources of folate include liver, ripe banana, leafy green vegetables, orange juice and avocado.

All pregnant women should supplement their diet with 5 mg of folic acid daily to prevent megaloblastic anaemia.

Vitamin B12

Deficiency in vitamin B12 causes megaloblastic anaemia and irreparable damage to the central nervous system. This deficiency, however, is rare; it is associated with a strict vegetarian diet.

Vitamin A

Vitamin A plays an important role in maintaining integrity of epithelial surfaces such as the skin and mucous membranes. It is essential for normal immune responses. Not enough is known, however, about vitamin A in pregnancy. Maternal supplementation with vitamin A is associated with

- ⇒ reduced prevalence of anaemia
- ⇒ reduced maternal mortality
- ⇒ increased survival of HIV-infected women and children

Vitamin A deficiency is associated with

- ⇒ impaired vision with the earliest symptom being night blindness
- ⇒ increased mortality
- ⇒ mother-to-child transmission of HIV
- ⇒ higher concentrations of HIV-1 virus in breast milk of immunosuppressed women

Studies in developed countries, where the prevalence of vitamin A deficiency is low, have found that vitamin A intake of over 10,000 units in preconception and early pregnancy is associated with increased risk of birth defects in babies. Studies of vitamin A supplementation among women in developing countries, where vitamin A deficiency is common, did not find any evidence of increased birth defects. It is currently recommended that pregnant women be supplemented with a low dosage of vitamin A not exceeding of 5000 units per day. New research findings show that high doses of vitamin A supplementation may increase breast-milk transmission and therefore low dose supplementation should be maintained during the period of lactation.

Good sources of vitamin A include fish, fish oil, liver, yellow and green vegetables, and fluids.

Vitamin C

Vitamin C is essential for producing the collagen matrix, the building block for all connective tissue such as skin, bone, teeth and tendons. Severe deficiency causes scurvy; however, this condition is rare in pregnancy.

Sources of vitamin C

- Good sources of vitamin C are citrus fruits, especially fresh orange juice.
- The recommended daily intake is 60 mg per day.
- Excessive use of large amounts of vitamin C during pregnancy may change foetal metabolism, make the baby overdependent on vitamin C and thus increase the risk of a deficiency syndrome.

Vitamin D

Vitamin D is important for maintaining strong bones and teeth. Vitamin D deficiency in pregnancy can lead to low levels of calcium in the foetus and poor development of the teeth. The body is able to make vitamin D following exposure to sunshine. Therefore vitamin D deficiency is not common in the tropics. In urban areas where working women spend most of the time indoors in offices, or if their culture requires that they be covered up all the time, such as the buibui-clad Muslim women, there is a risk of being vitamin D deficiency. Excessive intake of vitamin D may be harmful to the foetus and causes hypercalcaemia.

Vitamin K

Vitamin K is essential for blood clotting. Maternal deficiencies have not been described. It is transported across the placenta to the foetus. Newborn babies with vitamin K deficiency are at risk of spontaneous bleeding such as intracranial bleeding or bleeding from the cord. Babies may become severely anaemic and require a blood transfusion. Vitamin K is synthesized in the liver and deficiencies are related to immaturity of the liver in the newborn baby. Deficiency in the infant is treated with supplementation with vitamin K. Preterm babies and babies of mothers with complicated pregnancies are routinely supplemented with vitamin K.

Vitamin E

Vitamin E is important in maintaining the health of cell membranes. This vitamin protects cells from oxidative stress. The foetal vitamin E level is 1/4 to 1/3 of that in the mother. Supplementing the vitamin in the pregnant woman does not increase the level in the baby. Babies born of mothers low in vitamin E may suffer from spontaneous haemolysis (destruction of red cells) in the first 6 months of life.

Vitamin supplementation in pregnant HIV-infected women

Micronutrient supplementation has been found to be beneficial to both HIV-infected and uninfected women. In a Tanzanian study HIV-seropositive and HIV-seronegative women were randomized to receive a multivitamin supplement containing vitamins B1, B2, B6, niacin, B12, C and E, folic acid and iron or a supplement containing iron and folate alone. The micronutrient supplement that included the B vitamins significantly reduced the incidence of low birth weight, severe preterm delivery and babies small for gestation. The multivitamin supplementation was also beneficial to these HIV-1 infected women. Overall, women on multivitamin supplementation had significantly elevated CD₄, CD₈ and CD₃ lymphocyte counts; immunosuppressed people have low CD4 counts.



Discuss clinical examination for micronutrient deficiency. What abnormalities are found in the following body tissues when there are nutritional deficiencies?

- ⇒ skin and nails
- ⇒ mucous membranes
- ⇒ teeth
- ⇒ eyes
- ⇒ gastrointestinal function
- ⇒ skeleton
- ⇒ thyroid size
- ⇒ haemoglobin content
- ⇒ birthweight of offspring



Diets of women

- What are the locally available foods and what is their nutritional value?
- What combinations are necessary to achieve an adequate diet?
- What does a 'serving' of a particular food mean?
- When would food supplementation be necessary?



What foods does the community think . . .

⇒ enhance lactation performance?

⇒ impair lactation?

Interaction of HIV infection and nutrition

⇒ effect of nutrition on HIV infection

⇒ effect of HIV infection on nutrition



2-1-7

Factors contributing to nutritional impairment in the HIV-infected mother

What is the cause of nutritional impairment in HIV infection?

Four factors have been implicated in nutritional impairment in HIV-infected persons:

⇒ poor energy intake

⇒ malabsorption of nutrients from the gut

⇒ abnormal energy utilization

⇒ psychological and social stress

Poor energy intake

HIV-infected persons are unable to eat adequate amounts of food, and therefore they do not receive the nutrients they require. Several conditions may make it difficult for the person to eat enough:

- Oral lesions—infection with candida, herpes simplex or cytomegalovirus. These infections make the mouth sore, and the HIV-infected person experiences pain when chewing and swallowing food.
- Gastric irritation, nausea or vomiting caused by HIV and its co-morbidities or the medication being taken leads to loss of appetite and reduced nutritional intake.

- Patients suffering from encephalopathy may reduce their nutrient intake.
- Primary anorexia may lead to reduced nutrient intake. There is evidence that some of the products of inflammation such as the tumour necrosis factor may cause profound anorexia in HIV-infected individuals.

Gastrointestinal tract absorption

Absorption of nutrients in the gastrointestinal tract is impaired in the HIV-infected person because of primary HIV infection of the gut epithelium as well as infection with other pathogens that cause malabsorption such as bacteria, protozoa, fungi and viral agents. These infections commonly manifest themselves with diarrhoea.

Energy use

During infections, including HIV, the basal metabolic rate increases. Therefore, a higher caloric intake is needed to sustain normal metabolism. The HIV-infected person sustains an increase in the basal metabolic rate whether that person is receiving enough nutrients or not, and this leads to a breakdown of body tissues and subsequent wasting.

Social and psychosocial status

In nearly all instances, HIV is a family diagnosis that exerts social, psychological and economic stress on the individual and the entire family.

Financial constraints from a variety of factors including loss of employment or increased health expenditure limit the family resources available to ensure a varied and nutritious diet for the sick person and the other family members.

Assisting HIV-infected women to maintain good nutrition



Ask participants to give suggestions.



Group work

Give this exercise as a homework assignment. Divide the participants into three groups. Ask them to prepare a day's menu for a pregnant woman in the region they come from. They should consider the following:

⇒ a peasant farmer with Ksh 50 per day for food

⇒ an urban housewife with Ksh 100 per day for food

⇒ a woman who is employed, such as a nurse or a teacher

The groups should visit the local market to determine what foods are readily available and the costs. Food composition tables should be consulted in carrying out this exercise. The groups should then present to each other in a plenary session. The participants should highlight the lessons learned and what impact this will have on their nutritional counseling of pregnant women.

Maternal nutrition

Objective

By the end of this session, the participant should be able to promote adequate maternal nutrition and recognize and manage nutritional deficiencies.

2-1-1

Factors affecting women's nutritional status

- ◆ Nutrition intake
- ◆ Workload
- ◆ Physical exercise
- ◆ Body image
- ◆ Addictive drugs

2-1-2

Indicators of adequate nutrition

- ◆ Birth weight
- ◆ Mother's weight and height
- ◆ Body mass index
- ◆ Mid-term circumference
- ◆ Weight gain
 - Rate
 - Absolute
- ◆ Weight loss during lactation
- ◆ Anaemia

2-1-3

Average weight of the products of pregnancy

Product	Weight (kg)
Foetus	3.0
Placenta	0.4
Amniotic fluid	0.8
Uterus (weight increase)	1.1
Breast tissue (weight increase)	1.4
Blood volume (weight increase)	1.8 (1500 ml)
Maternal fat store	1.8–3.6
Total	10.3–13.9

2-1-4

Micronutrient requirements during pregnancy

Minerals

- ◆ Calcium
- ◆ Phosphorus
- ◆ Magnesium
- ◆ Iodine
- ◆ Iron

2-1-5

Micronutrient requirements during pregnancy

Water-soluble vitamins

- ◆ B vitamins (thiamin, niacin, riboflavin, folic acid, B12)
- ◆ Vitamin C

Fat-soluble vitamins

- ◆ Vitamin A
- ◆ Vitamin D
- ◆ Vitamin E
- ◆ Vitamin K

2-1-6

Factors associated with nutritional impairment of HIV-infected women

- ◆ Poor energy intake
- ◆ Malabsorption
- ◆ Abnormal energy utilization
- Psychological and social stress

2-1-7

Unit 2

Antenatal preparation for lactation

prepared by
Prof. Rachel Musoke

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and
Dr Dorothy Mbori-Ngacha

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Antenatal preparation for lactation

Introduction

Mothers need to prepare themselves during pregnancy for successful breastfeeding. The antenatal clinic setting presents opportunities for providing information and skills.

Objective

By the end of this unit the participants will be able to plan and implement an antenatal programme that supports mothers to breastfeed.

Group work

Divide the participants into groups of three and assign each group one of the 10 items listed below. Give the groups 10 minutes to prepare. Each group will then report (5 minutes each) to the others in a plenary session (50 minutes).

1. Develop a day's menu for a pregnant woman who has only Ksh 100 for her food budget. The diet should contain four categories of food:
 - ⇒ protein
 - ⇒ energy
 - ⇒ vitamins
 - ⇒ minerals

This diet should be based on commonly available foodstuffs.

2. Discuss preparing the nipple for breastfeeding.
3. Discuss positioning and attaching the baby on the breast. How does this affect production of prolactin and oxytocin hormones?
4. Discuss myths and beliefs that hinder breastfeeding.
5. What information should you provide on the advantages of breastfeeding?

6. How do you examine the breast in preparation for lactation?
7. What is the timing of the first breastfeeding?
 - ⇒ Why is it important?
 - ⇒ Is it feasible?
 - ⇒ How long should it be?
8. Discuss breast hygiene.
9. How long should a feeding last and who decides the frequency of feeding?
 - ⇒ The baby?
 - ⇒ The mother?

Discuss the merits of demand feeding over timed feeding.

- ⇒ It encourages milk production.
 - ⇒ It promotes breast health, as it prevents engorgement.
 - ⇒ The baby feeds well when hungry.
10. If the mother becomes pregnant during lactation, what advice would you give her?

The output of this session should be used as part of the workplan for the team when participants return to their stations.



Infant attachment on the breast—practical exercise

2-2-1

1. Display figures 1 and 2, then figures 3 and 4. Let the participants tell you what the correct position for attachment on the breast is. (15 minutes)

What difference do you see?

Figure 1

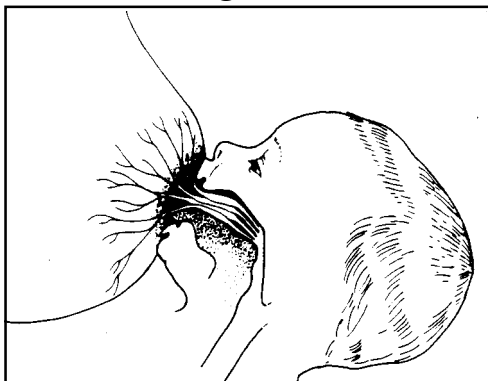


Figure 2





2-2-2

What difference do you see?

Figure 3

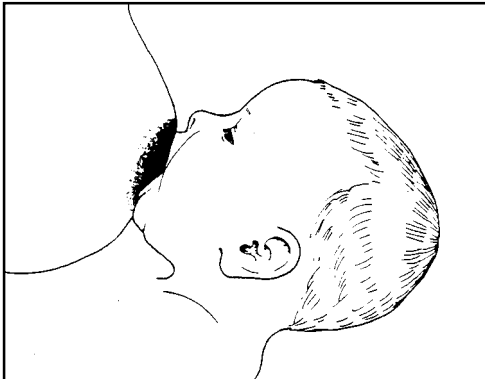
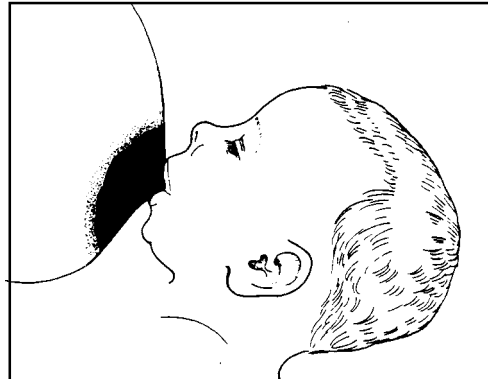


Figure 4



2. Visit the ANC, labour ward and postnatal wards. Observe and demonstrate correct attachment on the breast. Practise counseling mothers on breastfeeding. Have participants return to a plenary session and share their experiences. (75 minutes)



Time: 2 hours for the whole session

Practical exercise on infant attachment on the breast

What difference do you see?

Figure 1

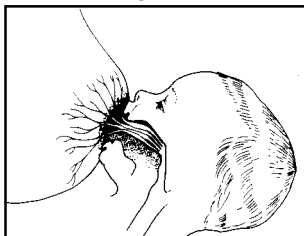
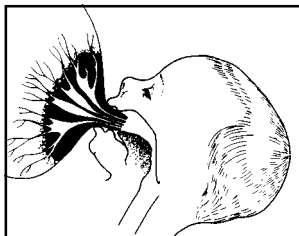


Figure 2



2-2-1

Practical exercise on infant attachment on the breast

What difference do you see?

Figure 3

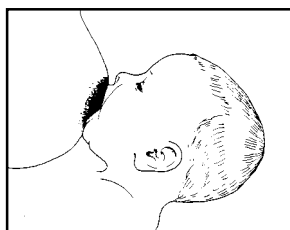
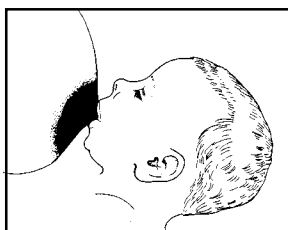


Figure 4



2-2-2

Unit 3

Common breastfeeding problems

3

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Common breastfeeding problems

↓ Introduction

Problems may arise during breastfeeding. Many of these are preventable with good maternal and health care practice. Some can be prevented by good antenatal preparation.

- Assistance by a knowledgeable health worker can stop progression to serious problems in many of the conditions we shall deal with.
- Throughout counseling, encourage mothers to seek help early.



2-3-1

🎯 Objective

By the end of this unit the participant should be able to assist a mother to prevent common breastfeeding problems and if they occur, be able to manage them appropriately.

Breast disease and HIV infection

A number of studies have now shown that breast disease significantly increases the risk of transmitting HIV through breast milk. Please review the material presented in module 1 on breast-milk transmission of HIV.

Specifically, breast engorgement, cracked nipples, mastitis and breast abscess all increase the risk of a woman transmitting HIV to her breastfeeding baby. Subclinical mastitis, characterized by elevated breast-milk sodium, is associated with breast-milk stasis, systemic and local infection, and micronutrient deficiencies. Subclinical mastitis is associated with elevated breast-milk HIV. Breast disease can be prevented through good breastfeeding technique that includes good attachment of the baby on the breast and frequent emptying of the breasts.

Vitamin A deficiency is also associated with elevated breast-milk HIV DNA; however, clinical trials of supplementing with vitamin A have failed to reduce the rate of mother-to-child transmission of HIV.



2-3-2

Nipple disorders

Flat and inverted nipples

- Examine and assess protractility by pressing on the areola.
- Reassure the mother.
- Plan extra help after the baby is born.

Position the baby properly (see figs. 1 and 3 on p. 34 and 35).

- Attachment should be on the areola.
- The mother should shape the nipple before putting baby on the breast as a way of facilitating attachment.
- If the breast is very full, expressing a little milk often stimulates the nipple sufficiently to allow proper attachment.

Generally:

- Flat nipples succeed with help.
- Inverted nipples are more problematic and should be referred to a trained lactation consultant.

Painful, cracked nipples



Discuss with the participants the possible causes.

The common causes of painful and cracked nipples are

- ⇒ poor position and attachment on the breast
- ⇒ localized candida infection



How do you manage painful, cracked nipples?

- The mother should be assisted to place the baby correctly on the breast.
- After a feed the mother should smear some breast milk on the breasts and then allow them to dry in the air. The area should be kept dry and airy. Exposure to direct sunshine may help.
- The woman should be advised to avoid abrasive creams and soaps.



Ask the participants to list the different creams and soaps that their clients use for breast care.

- The breasts should not be washed before each feed because this accelerates the loss of the natural lubricating oils. Removing these natural lubricants makes the nipples more vulnerable to cracking. A bath once a day and use of clean underwear is adequate to maintain good hygiene.

Infected nipples

Candida is the most common infection associated with cracked nipples. Often the baby is also suffering from oral thrush. Both mother and baby should be treated. The baby should not be fed on the affected side, but rather encourage the mother to express milk to avoid engorgement. The mother can give the expressed breast milk to the baby after it is heat treated.



2-3-3

Breast disorders

Engorgement

Breast engorgement is caused by an unbalanced supply and demand for breast milk. Often the precipitating event is prolonged separation of the mother and baby. Painful nipples may also lead to infrequent feeding on the affected breast, leading to engorgement. Breast engorgement causes subclinical mastitis, a condition that is associated with increased breast-milk transmission of HIV.

Prevention of breast engorgement

- Initiate breastfeeding soon after delivery.
- Breastfeed the baby on demand.
- Avoid prelacteal feeds.
- Make sure that the baby is in a good position and is attached well on the breast.

Management of engorged breasts

- The first step is examination and assessment. The patient will complain of pain in the affected breast and the skin will be stretched tightly.
- The woman should be encouraged to feed her baby frequently to empty the breasts.
- Milk should be expressed from the breasts until the discomfort is relieved. The expressed breast milk can be used immediately or stored for later use.
- The breasts should be supported with a well-fitting brassiere until the pain subsides.
- Pain interferes with the let-down reflex thus preventing milk flow and therefore may aggravate the breast engorgement. Therefore women should be provided with analgesics to relieve the pain.

Painful swelling

Painful swelling is caused by

- ⇒ blocked ducts
- ⇒ mastitis
- ⇒ breast abscess

Blocked ducts

Blocked ducts frequently occur when a woman wears tight, restrictive clothing.

To manage the blocked ducts

- Frequently empty the breast. The woman should be shown how to express the milk before a feed to offer the nipple so that the baby can attach easily. The woman should express breast milk after a feed to relieve the engorged breast.
- When ducts are blocked, gentle massage will facilitate easy flow of the milk along the ducts.
- Counsel women to wear well-fitting underclothing to avoid blockage of the ducts.

Mastitis and abscess

Mastitis and abscesses usually are preceded by blocked duct or engorgement.

The cardinal sign of mastitis is a **red, hot, tender breast**.

Management of mastitis and breast abscess

- The breast should be emptied frequently. The woman should be shown how to express the milk.
- If there are blocked ducts, gentle massage will facilitate easy flow of the milk along the ducts.
- The woman should be given a course of broad-spectrum antibiotics for at least 10 days.
- An abscess will need to be drained. Such a patient should be referred to the district hospital for the procedure to be done under general anaesthesia.
- Effective analgesics should be provided for as long as the woman requires them.
- Warm or cold compresses can be used according to the woman's preference to reduce the pain and discomfort.



2-3-4

Prevention of nipple and breast disease

The key strategies in preventing nipple and breast disease include

- ⇒ good latching-on technique
- ⇒ frequent emptying of the breast
- ⇒ prevention and management of pain
- ⇒ prompt treatment of infection



Do breast and nipple problems increase MTCT? Discuss.

What do you do with the expressed breast milk in this case?

The risk of transmitting HIV through breast milk is very high if the mother has nipple or breast disease. Most women do not know their HIV-infection status. In areas of high HIV prevalence among pregnant women, it may be better to express and boil the breast milk before feeding the infant until the breasts heal if a mother has cracked, bleeding nipples, mastitis or breast abscess.



2-3-5

Other breastfeeding problems

Not enough milk

State:

The commonest reason that mothers give for adding complementary feeds to a child's diet before the recommended time of 6 months is not having enough milk. Often this is a perceived problem, not a real one. In such a situation, you need to establish if the problem is perceived or real.



Assess by taking history.



What are the reasons that mothers give for feeling that they do not have enough milk? Ask participants to write down the causes they know.

Some of the commonly cited reasons why a mother feels she does not have enough milk have very rational physiological explanations.

- Baby cries a lot: The baby may be suffering from colic or there may be some other cause of discomfort.
- Baby feeds very frequently: This is normal. Breast milk is more easily digested than other milk. The baby will wake up to feed about every three hours. Babies go through episodes of rapid growth called growth spurts. During a growth spurt the baby will feed more frequently to meet the increased requirements for growth. A mother's lack of knowledge of how frequently a baby needs to feed may make her worry that her baby is not receiving enough milk.
- Breasts feel flabby: Early in lactation the breasts feel full because blood flow to the breasts increases. Later the breasts feel soft. The amount of milk in the breasts cannot be gauged by the texture of the breasts.



How do you judge if there is enough milk?

- We can judge whether babies are receiving enough milk by how frequently they wet themselves. Normally this is 8 to 10 times in a 24-hour period.
- A baby who is receiving an adequate amount of milk will gain weight rapidly; therefore, regular growth monitoring will help a mother breastfeed confidently.



How do you help the mother?

- Reassure her and explain the normal physiological changes that take place during lactation.
- Identify the cause of any difficulties and assist her in overcoming them.
- Encourage frequent feeding, emptying the breasts.
- Discourage her from giving supplements if she has introduced them before the recommended age of 6 months.

Combining work and breastfeeding

State that

- All women work.
- Work may separate them from their infants for a long period of day or night.



Ask participants to group types of work.

⇒ working in the house and home

⇒ self-employed but working outside the home

⇒ employed



Discuss how each of these groups can be assisted.

⇒ how to manage their time

⇒ negotiation with employer

⇒ what to give their infants while away from home

⇒ breast-milk expression and storage

⇒ instructions to baby minder



Discuss

⇒ maternity leave

⇒ nursing breaks

⇒ baby creches

Common breastfeeding problems

Objective

By the end of this session the participant should be able to assist a mother to prevent common breastfeeding problems and if they occur provide the appropriate care

2-3-1

Nipple disorders

- ◆ Flat and inverted nipples
- ◆ Painful and cracked nipples
- ◆ Infected nipples

2-3-2

Breast disorders

- ◆ Engorgement
- ◆ Painful swelling
- ◆ Blocked ducts
- ◆ Mastitis and abscess

2-3-3

Prevention of nipple and breast disease

- ◆ Good latching-on technique
- ◆ Frequent emptying of the breasts
- ◆ Prevention and management of pain
- ◆ Prompt treatment of infection

2-3-4

Other breastfeeding problems

- ◆ Not enough milk
- ◆ Working mothers

2-3-5

Unit 4

International infant feeding codes and policies, and 10 steps for promoting breastfeeding

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4

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International infant feeding codes and policies, and 10 steps for promoting breastfeeding



Summary of the international code

2-4-1

The International Code of Marketing of Breast-Milk Substitutes (reproduced in annex 1, p. 65) seeks to encourage and protect breastfeeding and to control marketing practices so they do not inappropriately promote products for artificial feeding. The code applies to artificial milk for babies and to other products used to feed babies, especially when they are meant for use in a feeding bottle. The code also applies to feeding bottles and teats. We have seen in the discussions in the previous section that good breastfeeding practice is essential for the health of the baby. Poor breastfeeding practice that leads to the development of breast and nipple disease and mixed feeding are dangerous for the infant on an HIV-infected mother because they increase the likelihood of breast-milk transmission of HIV. Since most women do not know their HIV-infection status, it is imperative that we promote good breastfeeding practice universally.



Objective

2-4-2

By the end of this unit the learner should be familiar with

- ⇒ the international code on the marketing of breast-milk substitutes
- ⇒ 10 steps to successful breastfeeding
- ⇒ international guidelines on feeding infants of HIV-1-infected women
- ⇒ the Kenyan infant feeding policy and guidelines



International code on marketing breast-milk substitutes

2-4-3

2-4-4

2-4-5

2-4-6

The infant feeding code includes 10 important provisions:

- ⇒ no advertising of these products to the public

- ⇒ no free samples to mothers
- ⇒ no promotion of products in health care facilities
- ⇒ no companies to advise mothers
- ⇒ no gifts or personal samples to health workers
- ⇒ no words or pictures idealizing artificial feeding, including pictures of infants or text about the products
- ⇒ scientific and factual information to health workers
- ⇒ all information on artificial infant feeding, including labels, to explain the benefits of breastfeeding and the costs and hazards associated with artificial feeding
- ⇒ no promotion of unsuitable products such as sweetened condensed milk
- ⇒ quality of all products high, and taking into account climate and storage conditions of the country in which they are used

A code and a breastfeeding policy are useful only if they are implemented. Operational research work has helped identify strategies that can be used in promoting good breastfeeding practice. These are called the 10 steps to successful breastfeeding. We will now discuss each of these steps and identify the ways in which they can be used to promote successful breastfeeding practice.



Scientific basis for the 10 steps to successful breastfeeding



2-4-7

Step 1— Have a written breastfeeding policy that is routinely communicated to all health care staff

Why have a policy?

- It requires a course of action and provides guidance.
- It helps establish consistent care for mothers and babies.

How should it be presented?

- It should be written in the most commonly used language.

- It should be available to all staff caring for mothers and babies.
- It should be displayed in areas where mothers and babies are cared for.



2-4-8

Step 2— Train all health care staff in the skills necessary to implement this policy

Areas of knowledge to emphasize

- Explain the advantages of breastfeeding.
- Explain the risks of artificial feeding.
- Explain the mechanisms of lactation and suckling.
- Show how to help mothers initiate and sustain breastfeeding.
- Show how to carry out a breastfeed.
- Explain how to resolve breastfeeding difficulties.
- Describe hospital breastfeeding policies and practices.



2-4-9

Step 3— Inform all pregnant women about the benefits of breastfeeding

What should prenatal education include?

- It should emphasize the importance of exclusive breastfeeding.
- It should explain the risks of artificial feeding and use of bottles and pacifiers, soothers, teats, nipples.
- It should **not** include group education on formula preparation.



2-4-10

Step 4— Help mothers initiate breastfeeding within half an hour of birth

Why should we initiate early feeding for the newborn?

- It increases the overall duration of breastfeeding.
- It allows skin-to-skin contact for warmth and bonding of the baby with the mother.
- It provides colostrum for the baby's first immunization.
- It takes advantage of the first hour of alertness.
- The baby learns to suckle more effectively.



2-4-11

Step 5— Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants

Supply and demand

- Milk removal stimulates increased production.
- The amount of breast milk removed at each feed determines the rate at which milk will be produced in the next few hours.
- Milk removal must be continued during separation to maintain supply.



2-4-12

Step 6— Give newborns no food or drink other than breast milk unless medically indicated

What is the impact of routine formula supplementation?

- It decreases the frequency or efficiency of suckling.
- It decreases the amount of milk removed from the breast.
- It delays milk production or reduces the milk supply from the breast.
- Some infants have difficulty attaching to the breast if they receive formula by bottle.

Medically indicated exception for breastfeeding

There are exceptions during which the infant may require other fluids or food in addition to or in place of breast milk. The feeding programme of these babies should be determined by qualified professionals on an individual basis.



2-4-13

Step 7— Rooming in

A hospital arrangement where the mother and baby stay in the same room day and night allows unlimited contact between mother and baby.

Why should babies room in?

- It reduces costs.
- It requires minimum equipment.
- It requires no additional personnel.
- It reduces infection.

- It helps establish and maintain breastfeeding.
- It facilitates the bonding process.

Step 8— Encourage breastfeeding on demand



2-4-14

What is breastfeeding on demand?

Breastfeeding on demand means breastfeeding whenever the baby or mother wants, with no restrictions on the length or frequency of breastfeeds.

Why on-demand breastfeeding?

- It facilitates earlier passage of meconium.
- It minimizes weight loss in the first few days of life.
- Breast-milk flow is established sooner.
- The volume of milk intake by day 3 is larger.
- It lowers the incidence of jaundice in the newborn.



2-4-15

Step 9— Give no artificial feeds or pacifiers (also called dummies and soothers) to breastfeeding babies

2-4-16

Step 10—The key to best breastfeeding practices is continued day-to-day support for the breastfeeding mother within her home and community

What do we mean by breastfeeding support?

- ⇒ early postnatal or clinical checkup
- ⇒ home visits
- ⇒ telephone calls
- ⇒ community services such as outpatient breastfeeding clinics
- ⇒ peer counseling programmes
- ⇒ mother support groups—help set up new groups and establish a working relationship with existing groups
- ⇒ family support systems

Types of breastfeeding support groups

- Traditional
 - ⇒ extended family
 - ⇒ culturally defined groups
 - ⇒ village women
- Modern (non-traditional groups)
 - ⇒ initiated by mothers themselves
 - ⇒ initiated by concerned professionals
- Government planned
 - ⇒ networks of national development groups, clubs, and so on
 - ⇒ health services, especially primary health care and trained traditional birth attendants

Hospitals that practice the 10 steps to successful breastfeeding are considered to be baby-friendly institutions.



Discuss the Kenyan infant feeding policy, given in annex 2, p. 75–76.
How consistent is it with the 10 steps to successful breastfeeding?

Policy guidelines for feeding infants of HIV-infected women



Review WHO guidelines in annex 3 p. 77 with the participants and emphasize the elements of establishing a breastfeeding policy.



How does the Kenya infant feeding policy address feeding for infants of HIV-infected women? Review the Kenya guidelines in annex 2.

State: Infant feeding recommendations for babies of HIV-infected women are not an excuse to violate the infant feeding code.

Summary of the international code

- ♦ The code seeks to encourage and protect breastfeeding and to control inappropriate marketing practices used to promote products for artificial feeding.
- ♦ The code applies to artificial milk for babies and to other products used to feed babies, especially when they are marketed for use in a feeding bottle. The code also applies to feeding bottles and teats.

2-4-1

Objectives

By the end of this unit the learner should be familiar with

- ♦ The international code on the marketing of breast-milk substitutes
- ♦ 10 steps to successful breastfeeding
- ♦ International guidelines on feeding infants of HIV-1 infected women
- ♦ The Kenyan infant feeding policy and guidelines

2-4-2

10 provisions of the international code on infant feeding (1)

- ♦ No advertising of all these products to the public
- ♦ No free samples to mothers
- ♦ No promotion of products in health care facilities
- ♦ No company nurses to advise mothers

2-4-3

10 provisions of the international code on infant feeding (2)

- ◆ No gifts or personal samples to health workers
- ◆ No words or pictures idealizing artificial feeding, including pictures of infants or text about the products
- ◆ Information to health workers scientific and factual

2-4-4

10 provisions of the international code on infant feeding (3)

- ◆ All information on artificial infant feeding including the labels, explain the benefits of breastfeeding and the costs and hazards associated with artificial feeding
- ◆ Unsuitable products such as sweetened condensed milk not to be promoted for babies

2-4-5

10 provisions of the international code on infant feeding (4)

- ◆ All products to be of high quality, and taking into account climate and storage conditions of the country where they are used

2-4-6

Step 1 to successful breastfeeding

Have a written breastfeeding policy that is routinely communicated to all health care staff.

2-4-7

Step 2 to successful breastfeeding

Train all health-care staff in the skills necessary to implement this policy.

2-4-8

Step 3 to successful breastfeeding

Inform all pregnant women about the benefits and management of breastfeeding.

2-4-9

Step 4 to successful breastfeeding

Help mothers initiate breastfeeding
within half an hour of birth.

2-4-10

Step 5 to successful breastfeeding

Show mothers how to breastfeed and
how to maintain lactation even if they
are separated from their infants.

2-4-11

Step 6 to successful breastfeeding

Give newborn infants no food or
drink other than breast milk unless
medically indicated.

2-4-12

Step 7 to successful Breastfeeding

Rooming in—this is a hospital arrangement where mother and baby stay in the same room day and night, allowing unlimited contact between mother and infant.

2-4-13

Step 8 to successful breastfeeding

Encourage breastfeeding on demand.

2-4-14

Step 9 to successful breastfeeding

Give no artificial teats or pacifiers (also called dummies and soothers) to breastfeeding infants.

2-4-15

Step 10 to successful breastfeeding

The key to best breastfeeding practices is continued day-to-day support for the breastfeeding mother within her home and community.

2-4-16

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ANNEX 1

International code of marketing of breast-milk substitutes

Preamble

The Member States of the World Health Organization:

AFFIRMING the right of every child and every lactating woman to be adequately nourished as a means of attaining and maintaining health;

RECOGNIZING that infant malnutrition is part of the wider problems of lack of education, poverty and social injustice;

RECOGNIZING that the health of infants and young children cannot be isolated from the health and nutrition of women, their socio-economic status and their roles as mothers;

CONSCIOUS that breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; that it forms a unique, biological and emotional basis for the health of both mother and child; that the anti-infective properties of breast milk help to protect infants against disease; and that there is an important relationship between breastfeeding and child spacing;

RECOGNIZING that the encouragement and protection of breastfeeding is an important part of the health, nutrition and other social measures required to promote healthy growth and development of infants and young children; and that breastfeeding is an important aspect of primary health care;

CONSIDERING that when mothers do not breastfeed, or only do so partially, there is a legitimate market for infant formula and for suitable ingredients from which to prepare it; that all these products should accordingly be made accessible to those who need them, through commercial or non-commercial distribution systems; and that they should not be marketed or distributed in ways that interfere with the protection and promotion of breastfeeding;

RECOGNIZING further that inappropriate infant feeding practices lead to infant malnutrition, morbidity and mortality in all countries, and that improper practices in the marketing of breast-milk substitutes and related products can contribute to these major public health problems;

CONVINCED that it is important, for infants to receive appropriate complementary foods, usually when the infant reaches four to six months of age, and that every effort should be made to use locally available foods; and convinced, nevertheless, that such complementary foods should not be used as breast-milk substitutes;

APPRECIATING that there are a number of social and economic factors affecting breastfeeding, and that accordingly, governments should develop social support systems to protect, facilitate and encourage it, and that they should create an environment that fosters breastfeeding, provides appropriate family and community support, and protects mothers from factors that inhibit breastfeeding;

AFFIRMING that health care systems and the health professionals and other health workers serving in them have an essential role to play in guiding infant feeding practices, encouraging and facilitating breastfeeding, and providing objective and consistent advice to mothers and families about the superior value of breastfeeding, or, where needed, on the proper use of infant formula, whether manufactured industrially or home prepared;

AFFIRMING further that educational systems and other social services should be involved in the protection and promotion of breastfeeding and in the appropriate use of complementary foods;

AWARE that families, communities, women's organizations and other non-governmental organizations have a special role to play in the protection and promotion of breastfeeding and in ensuring the support needed by pregnant women and mothers of infants and young children, whether breastfeeding or not;

AFFIRMING the need for governments, organizations of the United Nations system, non-governmental organizations, experts in various related disciplines, consumer groups and industry to cooperate in activities aimed at the improvement of maternal, infant and young child health and nutrition;

RECOGNIZING that governments should undertake a variety of health, nutrition and other social measures to promote healthy growth and development of infants and young children, and that this Code concerns only one aspect of these measures;

CONSIDERING that manufacturers and distributors of breast-milk substitutes have an important and constructive role to play in relation to breastfeeding and in the promotion of the aim of this Code and its proper implementation;

AFFIRMING that governments are called upon to take action appropriate to their social and legislative framework and their overall development objectives to give effect to the principles and aim of this Code, including the enactment of legislation, regulations or other suitable measures;

BELIEVING that, in the light of the foregoing considerations, and in view of the vulnerability of infants in the early months of life and the risks involved in inappropriate feeding practices, including the unnecessary and improper use of breast-milk substitutes, the marketing of breast-milk substitutes requires special treatment, which makes usual marketing practices unsuitable for these products;

THEREFORE:

The Member States hereby agree the following articles which are recommended as a basis for action.

Article 1: Aim of the Code

The aim of this Code is to contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breast-milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution.

Article 2: Scope of the Code

The Code applies to the marketing, and practices related thereto, of the following products: breast-milk substitutes, including infant formula; other milk products, foods and beverages, including bottlefed complementary foods, when marketed or otherwise represented to be suitable, with or without modification, for use as a partial or total replacement of breast milk; feeding bottles; and teats. It also applies to their quality and availability, and to information concerning their use.

Article 3: Definitions

For the purposes of this Code:

Breast-milk substitute means any food being marketed or otherwise represented as a partial or total replacement for breast milk, whether or not suitable for that purpose.

Complementary food means any food, whether manufactured or locally prepared, suitable as a complement to breast milk or to infant formula, when either becomes insufficient to satisfy the nutritional requirements of the infant. Such food is also commonly called weaning foods or breast-milk supplements.

Container means any form of packaging of products for sale as a normal retail unit, including wrappers.

Distributor means a person, corporation or any other entity in the public or private sector engaged in the business (whether directly or indirectly) of marketing at the wholesale or retail level a product within the scope of this Code. A primary distributor is a manufacturer's sales agent, representative, national distributor or broker.

Health care system means governmental, non-governmental or private institutions or organizations engaged, directly or indirectly, in health care for mothers, infants and pregnant women; and nurseries or child care institutions. It also includes health workers in private practice. For the purposes of this Code, the health care system does not include pharmacies or other established sales outlets.

Health worker means a person working in a component of such a health care system, whether professional or non-professional, including voluntary, unpaid workers.

Infant formula means a breast-milk substitute formulated industrially in accordance with applicable Codex Alimentarius standards, to satisfy the normal nutritional requirements of infants up to between four and six months of age, and adapted to their physiological characteristics. Infant formula may also be prepared at home, in which case it is described as home prepared.

Label means any tag, brand, mark, pictorial or other descriptive matter, written, printed, stencilled, marked, embossed or impressed on, or attached to, a container (see above) of any products within the scope of this Code.

Manufacturer means a corporation or other entity in the public or private sector engaged in the business or function (whether directly or through an agent or through an entity controlled by or under contract with it) of manufacturing a product within the scope of this Code.

Marketing means product promotion, distribution, selling, advertising, product public relations, and information services.

Marketing personnel means any persons whose functions involve the marketing of a product or products coming within the scope of this Code.

Samples means single or small quantities of a product provided without cost.

Supplies means quantities of a product provided for use over an extended period, free or at a low price, for social purposes, including those provided to families in need.

Article 4: Information and education

- 4.1 Governments, should have the responsibility to ensure that objective and consistent information is provided on infant and young child feeding for use by families and those involved in the field of infant and young child nutrition. This responsibility should cover either the planning, provision, design and dissemination of information or their control.
- 4.2 Informational and educational materials, whether written, audio or visual, dealing with the feeding of infants and intended to reach pregnant women and mothers of infants and young children, should include clear information on all the following points:
 - a) the benefits and superiority of breastfeeding;
 - b) maternal nutrition, and the preparation for and maintenance of breastfeeding;
 - c) the negative effect on breastfeeding of introducing partial bottlefeeding;
 - d) the difficulty of reversing the decision not to breastfeed; and,
 - e) where needed, the proper use of infant formula, whether manufactured industrially or home prepared.

When such materials contain information about the use of infant formula, they should include the social and financial implications of its use; the health hazards of inappropriate foods or feeding methods; and in particular, the health hazards of unnecessary or improper use of infant formula and other breast-milk substitutes. Such materials should not use any pictures or text which may idealize the use of breast-milk substitutes.

- 4.3 Donations of informational or educational equipment or materials by manufacturers or distributors should be made only at the request and with the written approval of the appropriate government authority or within guidelines given by governments for this purpose. Such equipment or materials may bear the donating company's name or logo, but should not refer to a proprietary product that is within the scope of this Code, and should be distributed only through the health care system.

Article 5: The general public and mothers

- 5.1 There should be no advertising or other form of promotion to the general public of products within the scope of this Code.
- 5.2 Manufacturers and distributors should not provide, directly or indirectly, to pregnant women, mothers or members of their families, samples of products within the scope of this Code.
- 5.3 In conformity with paragraphs 1 and 2 of this Article, there should be no point-of-sale advertising, giving of samples, or any other promotion device to induce sales directly to the consumer at the retail level, such as special displays, discount coupons, premiums, special sales, loss-leaders and tie-in sales, for products within the scope of this Code. This provision should not restrict the establishment of pricing policies and practices intended to provide products at lower prices on a long-term basis.
- 5.4 Manufacturers and distributors should not distribute to pregnant women or mothers of infants and young children any gifts of articles or utensils which may promote the use of breast-milk substitutes or bottle-feeding.
- 5.5 Marketing personnel, in their business capacity, should not seek direct or indirect contact, of any kind with pregnant women or with mothers of infants and young children.

Article 6: Health care systems

- 6.1 The health authorities in Member States should take appropriate measures to encourage and protect breastfeeding and promote the principles of this Code, and should give appropriate information and advice to health workers, in regard to their responsibilities, including the information specified in Article 4.2.
- 6.2 No facility of a health care system should be used for the purpose of promoting infant formula or other products within the scope of this Code. This Code does not, however, preclude the dissemination of information to health professionals as provided in Article 7.2.
- 6.3 Facilities of health care systems should not be used for the display of products within the scope of this Code, for placards or posters concerning such products, or for the distribution of material provided by a manufacturer or distributor other than that specified in Article 4.3.
- 6.4 The use by the health care system of professional service representatives, mothercraft nurses or similar personnel provided or paid for by manufacturers or distributors should not be permitted.
- 6.5 Feeding with infant formula, whether manufactured or home prepared, should be demonstrated only by health workers or other community workers if necessary; and only to the mothers or family members who need to use it; and the information given should include a clear explanation of the hazards of improper use.

- 6.6 Donations or low-price sales to institutions or organizations of supplies of infant formula or other products within the scope of this Code, whether for use in the institutions or for distribution outside them, may be made. Such supplies should only be used or distributed for infants who have to be fed on breast-milk substitutes. If these supplies are distributed for use outside the institutions, this should be done only by the institutions or organizations concerned. Such donations or low-priced sales should not be used by manufacturers or distributors as a sales inducement.
- 6.7 Where donated supplies of infant formula or other products within the scope of this Code are distributed outside an institution, the institution or organization should take steps to ensure that supplies can be continued as long as the infants concerned need them. Donors, as well as institutions or organizations concerned, should bear in mind this responsibility.
- 6.8 Equipment and materials, in addition to those referred to in Article 4.3, donated to a health care system may bear a company's name or logo but should not refer to any proprietary product within the scope of this Code.

Article 7: Health workers

- 7.1 Health workers should encourage and protect breastfeeding; and those who are concerned in particular with maternal and infant nutrition should make themselves familiar with their responsibilities under this Code, including the information specified in Article 4.2.
- 7.2 Information provided by manufacturers and distributors to health professionals regarding products within the scope of this Code should be restricted to scientific and factual matters, and such information should not imply or create a belief that bottle feeding is equivalent or superior to breastfeeding. It should also include the information specified in Article 4.2.
- 7.3 No financial or material inducements to promote products within the scope of this Code should be offered by manufacturers or distributors to health workers or members of their families, nor should these be accepted by health workers or members of their families.
- 7.4 Samples of infant formula or other products within the scope of this Code, or of equipment or utensils for their preparation or use, should not be provided to health workers except when necessary for the purpose of professional evaluation or research at the institutional level. Health workers should not give samples of infant formula to pregnant women, mothers of infants and young children, or members of their families.
- 7.5 Manufacturers and distributors of products within the scope of this Code should disclose to the institution to which a recipient health worker is affiliated any contribution made to him or on his behalf for fellowships, study tours, research grants, attendance at professional conferences, or the like. Similar disclosures should be made by the recipient.

Article 8: Persons employed by manufacturers and distributors

- 8.1 In systems of sales incentives for sales personnel, the volume of sales of products within the scope of this Code should not be included in the calculation of bonuses, nor should quotas be set specifically for sales of these products. This should not be understood to prevent the payment of bonuses based on the overall sales by a company of other products marketed by it.
- 8.2 Personnel employed in marketing products within the scope of this Code should not, as part of their job responsibilities, perform education functions in relation to pregnant women or mothers of infants and young children. This should not be understood as preventing such personnel from being used for other

functions by the health care system at the request and with the written approval of the appropriate authority of the government concerned.

Article 9: Labelling

- 9.1 Labels should be designed to provide the necessary information about the appropriate use of the product, and so as not to discourage breastfeeding.
- 9.2 Manufacturers and distributors of infant formula should ensure that each container has a clear, conspicuous, and easily readable and understandable message printed on it, or on a label which cannot readily become separated from it, in an appropriate language, which includes all the following points:
 - a) the words Important Notice or their equivalent;
 - b) a statement of the superiority of breastfeeding;
 - c) a statement that the product should be used only on the advice of a health worker as to the need for its use and the proper method of use;
 - d) instructions for appropriate preparation, and a warning against the health hazards of inappropriate preparation.

Neither the container nor the label should have pictures of infants, nor should they have other pictures or text which may idealize the use of infant formula. They may, however, have graphics for easy identification of the product as a breast-milk substitute and for illustrating methods of preparation. The terms humanized, maternalized or similar terms should not be used. Inserts giving additional information about the product and its proper use, subject to the above conditions, may be included in the package or retail unit. When labels give instructions for modifying a product into infant formula, the above should apply.

- 9.3 Food products within the scope of this Code marketed for infant feeding, which do not meet all the requirements of an infant formula but which can be modified to do so, should carry on the label that the unmodified product should not be the sole source of nourishment of an infant. Since sweetened condensed milk is not suitable for infant feeding, nor for use as a main ingredient of infant formula, its label should not contain purported instructions on how to modify it for that purpose.
- 9.4 The label of food products within the scope of this Code should also state all the following points:
 - a) the ingredients used;
 - b) the composition/analysis of the product;
 - c) the storage conditions required; and
 - d) the batch number, and the date before which the product is to be consumed, taking into account the climatic and storage conditions of the country concerned.

Article 10: Quality

- 10.1 The quality of products is an essential element for the protection of the health of infants and therefore should be of a high recognized standard.
- 10.2 Food products within the scope of this Code should, when sold or otherwise distributed, meet applicable standards recommended by the Codex Alimentarius Commission, and also the Codex Code of Hygienic Practice for Foods for Infants and Children.

Article 11: Implementation and monitoring

- 11.1 Governments should take action to give effect to the principles and aim of this Code as appropriate to their social and legislative framework, including the adoption of national legislation, regulations or other suitable measures. For this purpose, governments should seek, when necessary, the cooperation of WHO, UNICEF and other agencies of the United Nations system. National policies and measures, including laws and regulations, which are adopted to give effect to the principles and aim of this Code should be publicly stated, and should apply on the same basis to all those involved in the manufacture and marketing of products within the scope of this Code.
- 11.2 Monitoring the application of this Code lies with governments acting individually and collectively through the World Health Organization as provided in paragraphs 6 and 7 of this Article. The manufacturers and distributors of products within the scope of this Code and appropriate non-governmental organizations, professional groups, and consumer organizations should collaborate with governments to this end.
- 11.3 Independently of any other measures taken for implementation of this Code, manufacturers and distributors of products within the scope of this Code should regard themselves as responsible for monitoring their marketing practices, according to the principles and aim of this Code, and for taking steps to ensure that their conduct at every level conforms to them.
- 11.4 Non-governmental organizations, professional groups, institutions and individuals concerned should have the responsibility of drawing the attention of manufacturers or distributors to activities which are incompatible with the principles and aim of this Code, so that appropriate action can be taken. The appropriate governmental authority should also be informed.
- 11.5 Manufacturers and primary distributors of products within the scope of this Code should apprise each member of their marketing personnel of the Code and of their responsibilities under it.
- 11.6 In accordance with Article 62 of the Constitution of the World Health Organization, Member States shall communicate annually to the Director-General information on action taken, to give effect to the principles and aim of this Code.
- 11.7 The Director-General shall report in even years to the World Health Assembly on the status of implementation of the Code; and shall, on request, provide technical support to Member States preparing national legislation or regulations, or taking other appropriate measures in implementation and furtherance of the principles and aim of this Code.

Infant and young child feeding

The Thirty-ninth World Health Assembly,

Recalling resolutions WHA27.43, WHA31.47, WHA33.32, WHA34.22, WHA35.26 and WHA37.30 which dealt with infant and young child feeding;

Having considered the progress and evaluation report on infant and young child nutrition;

Recognizing that the implementation of the International Code of Marketing of Breast-milk Substitutes is an important contribution to healthy infant and young child feeding in all countries;

Aware that today, five years after the adoption of the International Code, many Member States have made substantial efforts to implement it, but that many products unsuitable for infant feeding are nonetheless being promoted and used for this purpose; and that sustained and concerted efforts will therefore continue to be

necessary to achieve full implementation of and compliance with the International Code as well as the cessation of the marketing of unsuitable products and the improper promotion of breast-milk substitutes;

Noting with great satisfaction the Guidelines concerning the main health and socio-economic circumstances in which infants have to be fed on breast-milk substitutes, in the context of Article 6, paragraph 6, of the International Code;

Noting further the statement in the Guidelines, paragraph 47: Since the large majority of infants born in maternity wards and hospitals are full term, they require no nourishment other than colostrum during their first 24–48 hours of life—the amount of time often spent by a mother and her infant in such an institutional setting. Only small quantities of breast-milk substitutes are ordinarily required to meet the needs of a minority of infants in these facilities, and they should only be available in ways that do not interfere with the protection and promotion of breastfeeding for the majority;

1. ENDORSES the report of the Director-General;

2. URGES Member States:

- 1) to implement the Code if they have not yet done so;
- 2) to ensure that the practices and procedures of their health care systems are consistent with the principles and aim of the International Code;
- 3) to make the fullest use of all concerned parties—health professional bodies, non-governmental organizations, consumer organizations, manufacturers and distributors—generally, in protecting and promoting breastfeeding and, specifically, in implementing the Code and monitoring its implementation and compliance with its provisions;
- (4) to seek the cooperation of manufacturers and distributors of products within the scope of Article 2 of the Code in providing all information considered necessary for monitoring the implementation of the Code;
- (5) to provide the Director-General with complete and detailed information on the implementation of the Code;
- (6) to ensure that the small amounts of breast-milk substitutes needed for the minority of infants who require them in maternity wards and hospitals are made available through the normal procurement channels and not through free or subsidized supplies;

3. REQUESTS the Director-General:

- 1) to propose a simplified and standardized form for use by Member States to facilitate the monitoring and evaluation by them of their implementation of the Code and reporting thereon to WHO, as well as the preparation by WHO of a consolidated report covering each of the articles of the Code;
- 2) to specifically direct the attention of Member States and other interested parties to the following:
 - a) any food or drink given before complementary feeding is nutritionally required may interfere with the initiation or maintenance of breastfeeding and therefore should be neither promoted nor encouraged for use by infants during this period;
 - b) the practice being introduced in some countries of providing infants with specially formulated milks (so-called follow-up milks) is not necessary.

Infant and young child nutrition

The Forty-seventh World Health Assembly,

Having considered the report by the Director-General on infant and young child nutrition;

Recalling resolutions WHA33.32, WHA34.22, WHA35.26, WHA37.30, WHA39.28, WHA41.11, WHA43.3, WHA45.34 and WHA46.7 concerning infant and young child nutrition, appropriate feeding practices and related questions;

Reaffirming its support for all these resolutions and reiterating the recommendations to Member States contained therein;

Bearing in mind the superiority of breast milk as the biological norm for the nourishment of infants, and that a deviation from this norm is associated with increased risks to the health of infants and mothers;

1. THANKS the Director-General for his report;

2. URGES Member States to take the following measures:

- 1) to promote sound infant and young child nutrition, in keeping with their commitment to the World Declaration and Plan of Action for Nutrition, through coherent effective intersectoral action, including:
 - a) increasing awareness among health personnel, non-governmental organizations, communities and the general public of the importance of breastfeeding and its superiority to any other infant feeding method;
 - b) supporting mothers in their choice to breastfeed by removing obstacles and preventing interference that they may face in health services, the workplace, or the community;
 - c) ensuring that all health personnel concerned are trained in appropriate infant and young child feeding practices, including the application of the principles laid down in the joint WHO/UNICEF statement on breastfeeding and the role of maternity services;
 - d) fostering appropriate complementary feeding practices from the age of about six months, emphasizing continued breastfeeding and frequent feeding with safe and adequate amounts of local foods;
- 2) to ensure that there are no donations of free or subsidized supplies of breast-milk substitutes and other products covered by the International Code of Marketing of Breast-milk Substitutes in any part of the health care system;
- 3) to exercise extreme caution when planning, implementing or supporting emergency relief operations, by protecting, promoting and supporting breastfeeding for infants, and ensuring that donated supplies of breast-milk substitutes or other products covered by the scope of the International Code be given only if all the following conditions apply:
 - a) infants have to be fed on breast-milk substitutes, as outlined in the guidelines concerning the main health and socio-economic circumstances in which infants have to be fed on breast-milk substitutes,
 - b) the supply is continued for as long as the infants concerned need it;
 - c) the supply is not used as a sales inducement;
- 4) to inform the labour sector and employers' and workers' organizations about the multiple benefits of breastfeeding for infants and mothers and the implications for maternity protection in the workplace;

3. REQUESTS the Director-General:

- 1) to use his good offices for cooperation with all parties concerned in giving effect to this and related resolutions of the Health Assembly in their entirety;
- 2) to complete development of a comprehensive global approach and programme of action to strengthen national capacities for improving infant and young child feeding practices, including the development of methods and criteria for national assessment of breastfeeding trends and practices;
- 3) to support Member States, at their request, in monitoring infant and young child feeding practices and trends in health facilities and households, in keeping with new standard breastfeeding indicators;
- 4) to urge Member States to join in the Baby-friendly Hospital Initiative and to support them, at their request, in implementing this Initiative, particularly in their efforts to improve educational curricula and in-service training for all health and administrative personnel concerned;
- 5) to increase and strengthen support to Member States, at their request, in giving effect to the principles and aim of the International Code and all relevant resolutions, and to advise Member States on a framework which they may use in monitoring their application, as appropriate to national circumstances;
- 6) to develop, in consultation with other concerned parties and as part of WHO's normative function, guiding principles for the use in emergency situations of breast-milk substitutes or other products covered by the International Code which the competent authorities in Member States may use, in the light of national circumstances, to ensure the optimal infant feeding conditions;
- 7) to complete, in cooperation with selected research institutions, collection of revised reference data and the preparation of guidelines for their use and interpretation, so as to assess the growth of breastfed infants;
- 8) to seek additional technical and financial resources for intensifying WHO's support to Member States in infant feeding and in the implementation of the International Code and subsequent relevant resolutions.

**ANNEX 2**

GOVERNMENT OF KENYA

**NATIONAL POLICY INFANT FEEDING PRACTICES
SUMMARY STATEMENT**

Every facility providing Maternal and Child Health (MCH) services should:

1. Adhere to the National Infant Feeding Policy which should be routinely communicated to all health staff and strategically displayed;
2. Train all health care staff in skills necessary to implement this policy;
3. Provide information to all pregnant and lactating mothers and their partners on the benefits and management of breastfeeding;
4. Assist mothers to initiate breastfeeding within the first 30 minutes of birth;
5. Give newborn infants no food or drink other than breastmilk unless medically indicated (see specific guidelines on infants of HIV-infected mothers);
6. Show mothers how to breastfeed and maintain lactation even if they should be separated from their infants;
7. Practise rooming-in, allow infants to remain together with the mother 24 hours a day;
8. Encourage breastfeeding on demand;
9. Encourage and actively promote exclusive breastfeeding for infants up to six months;
10. Provide information and show mothers how to introduce appropriate and nutritious complementary foods to their infants from six months;
11. Encourage mothers to breastfeed for at least 24 months (see guidelines for HIV-infected mothers);
12. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic;
13. Not accept any free samples and supplies of breast substitutes;
14. Not allow any publicity by the manufacturers or agents of breastmilk substitutes;
15. Not give any feeds using bottles of teats.

DR. RICHARD MUGA OGW, DSM
DIRECTOR OF MEDICAL SERVICES

Produced with the assistance of



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graph TD
    A[ALL MOTHERS] --> B[HIV-NEGATIVE MOTHERS]
    A --> C[HIV-POSITIVE MOTHERS]
    B --> D[VOLUNTARY COUNSELING AND TESTING]
    C --> D
    D --> E[MOTHERS NOT TESTED]
    D --> F[MOTHERS WHO CHOOSE TO BREASTFEED]
    F --> G[HIV POSITIVE WHO CHOOSE TO BREASTFEED]
    F --> H[HIV POSITIVE WHO CHOOSE NOT TO BREASTFEED]
  
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ALL MOTHERS

- Inform about the benefits of breastfeeding
- Prevent or manage breastfeeding problems*
- Discuss appropriate complementary feeding

- Promote good maternal nutrition and self care
- Provide vitamin A supplements, iron, folic acid and zinc
- Counsel on child spacing
- Treat infections promptly

- Reduce HIV infections
- Reduce risk of mother-to-child transmission (MTCT) of HIV
- Give information on voluntary counseling and testing

HIV-NEGATIVE MOTHERS

- Reinforce risk reduction
- Promote breastfeeding

HIV-POSITIVE MOTHERS

- Give information on feeding options
- Supply information on cost of options
- Inform and teach skills on how to reduce or avoid MTCT
- Allow the mother and partner to make informed choice
- Provide appropriate antiretrovirals to prevent MTCT

VOLUNTARY COUNSELING AND TESTING

MOTHERS NOT TESTED

- Promote and support breastfeeding
- Make information available on voluntary counseling and testing and encourage it
- Reinforce risk reduction **

MOTHERS WHO CHOOSE TO BREASTFEED

HIV POSITIVE WHO CHOOSE TO BREASTFEED

- Support and encourage exclusive breastfeeding
- Prevent or manage breastfeeding problems
- Discourage breastfeeding if cracked nipples, mastitis or abscess
- Provide relevant antiretrovirals

HIV POSITIVE WHO CHOOSE NOT TO BREASTFEED

- Demonstrate safe preparation and storage of chosen milk
- Demonstrate cup and spoon feeding
- Counsel on the care of the breasts to avoid engorgement
- Provide reliable family planning material by 4 weeks

* Abscess, mastitis, breast and nipple disease

*** Manage as HIV-positive women who have features of clinical AIDS

ANNEX 3

New data on the prevention of mother-to-child transmission of HIV and their policy implications

Conclusions and recommendations

WHO Technical Consultation on behalf of the UNFPA/UNICEF/WHO/UNAIDS Inter-Agency Task Team on Mother-to-Child Transmission of HIV

Geneva, 11–13 October 2000; Approved 15 January 2001

Introduction

Mother-to-child transmission of HIV is the most significant source of HIV infection in children below the age of 10 years. The strategy recommended by the United Nations agencies to prevent MTCT includes 1) the primary prevention of HIV infection among parents to be, 2) the prevention of unwanted pregnancies in HIV-infected women, and 3) the prevention of HIV transmission from HIV-infected women to their infants. While the best ways to prevent HIV infection in infants remain primary prevention of HIV infection and reduction of unwanted pregnancies among women who are infected with HIV, many HIV-infected women become pregnant. In 1994 a long and complex regimen of the antiretroviral drug Zidovudine (ZDV) taken five times daily from the 14th week of pregnancy and intravenously during labour was shown to reduce the risk of transmission from mother to child by two-thirds, from 26 to 8%. This regimen had little practical value in developing countries, and more appropriate short-course ZDV regimens starting later in pregnancy were evaluated and also shown to be effective. Other interventions shown to prevent transmission of HIV include elective caesarean section and the avoidance of breastfeeding. While these interventions have become standard practice in developed countries, they are not always practical or safe in resource-limited settings.

Following release of results in 1998 that a short-course ZDV regimen starting from 36 weeks of pregnancy reduced the rate of transmission of HIV by 50%, a comprehensive strategy for MTCT prevention was developed.¹ Considerable experience has been obtained with pilot intervention projects, many initiated by UNICEF under the umbrella of the UN Inter-Agency Task Team on Mother-to-Child Transmission of HIV. The entry point to the interventions is voluntary counselling and testing (VCT) for HIV, followed by ZDV from 36 weeks and during labour to mothers who are HIV infected, and counselling on infant feeding options. More recent clinical trials have shown that other short-course ARV regimens using ZDV, the combination ZDV + Lamivudine (3TC), and Nevirapine are also effective in reducing the risk of transmission.

MTCT prevention interventions should not stand in isolation but be integrated where possible into existing health care infrastructures and reproductive health services. Moreover, the interventions should be seen as part of a wider response to HIV/AIDS, which includes expanding access to care and support for HIV-infected mothers and their families, including treatment of opportunistic infections and accelerating access to HIV treatment.

While the efficacy of ARV regimens in reducing the risk of HIV transmission is important, other issues need to be considered:

- *Practicality and effectiveness.* The selection process for enrolment and individual monitoring in clinical trials produces ideal conditions for which women can have access to the treatment and adhere to it

under study. These ideal conditions are seldom achieved once the treatment is expanded to a wider population in implementation programmes, and the actual reduction in the rate of MTCT achieved (effectiveness) is likely to be less than that observed in clinical trials (efficacy). The effectiveness of antiretroviral regimens that are more practical and simpler to administer should be close to their efficacy observed from clinical trials while the effectiveness of regimens complex and difficult to administer may be considerably less.

- *Safety.* For the women and infants who are offered antiretroviral prophylaxis, the risks of exposure to one or more drugs must be balanced by the benefit of preventing transmission of a fatal infection to the infant. In randomized controlled trials, the incidence of adverse events can be compared between the treated and the untreated groups, providing good comparative data on safety. However, observational studies and long-term monitoring of exposed mothers and infants are important additional sources of information that better reflect the actual conditions under which the ARV regimens are used.
- *Drug resistance.* Drug resistance has been reported in some women exposed to short-course antiretroviral regimens used for preventing MTCT. The implications of such resistance are uncertain and need to be considered in the context of increasing access to ARV treatment for patients in developing countries.

There is continued concern that up to 20% of infants born to HIV-infected mothers may acquire HIV through breastfeeding, depending on its duration and other risk factors. Replacement feeding² is the only way to completely avoid postnatal HIV transmission; however, this may not be possible in many locations in the developing world. Despite the risk of HIV transmission, breastfeeding provides appropriate nutrition, passively conveys protection against some micro-organisms including respiratory and gastrointestinal pathogens, and is more economical. Exclusive breastfeeding³ provides the infant's complete nutritional needs up to the age of 4 to 6 months and delays the return of fertility, playing an important role in birth spacing. To protect breastfeeding from commercial influences, the World Health Assembly adopted the International Code of Marketing of Breast-Milk Substitutes, now implemented worldwide. UNICEF and WHO launched the Baby-Friendly Hospital Initiative to improve maternity services so that they protect, promote and support breastfeeding.

Breastfeeding remains the best source of nutrition for the great majority of infants and should continue to be promoted and supported among mothers who are not known to be HIV-infected. Implementation of the Code of Marketing in national legislation and regulations provides protection to all women and their infants, whether or not they are breastfed.

New information on MTCT prevention has emerged since WHO issued guidance on the choices of ARV regimens⁴ and the risks of HIV transmission through breast milk.⁵ Important new research data related to the long-term efficacy and safety of different ARV regimens, to the dynamics and clinical implications of viral resistance, and to the role of infant feeding practices were published or presented at the 13th International AIDS Conference in Durban, South Africa, in July 2000. In addition, considerable experience has accumulated over the past two years from pilot implementation of MTCT-prevention programmes in resource-limited settings. In particular, programme managers have identified problems implementing current recommendations on HIV and infant feeding and have asked for clarification.

On behalf of the Inter-Agency Task Team on MTCT, WHO's Department of Reproductive Health and Research, in collaboration with the HIV/STI Initiative and the Department of Child and Adolescent Health, convened a Technical Consultation on new data on preventing MTCT and their policy implications. The

objective was to review recent scientific data and update current recommendations on the provision of ARVs and infant feeding counselling. The Technical Consultation focused on these two components, although it was recognized that many other components are important for a comprehensive package for MTCT prevention.

Objectives

The specific objectives of the meeting were

- to review the most recent scientific data on the use of ARV regimens to prevent MTCT, including issues of efficacy, safety, drug resistance and factors affecting optimal choices of ARV regimens in different settings
- to consider developments and likely time frame for access to and use of antiretroviral drugs for the treatment of HIV infection in resource-limited settings and the likely impact that MTCT prevention programmes may have on the effectiveness of such treatments
- to review evidence on risks and benefits for mother and infant of breastfeeding, including exclusive breastfeeding, and of replacement feeding, and to consider issues in conveying complex information on risks and benefits of different feeding options to mothers, enabling their informed choice
- to review, and revise if necessary, existing UN agency policies on choices of ARV regimens and infant feeding guidelines and counselling in MTCT prevention programmes in resource-limited settings
- to list outstanding research questions on the prevention of MTCT using ARV regimens or through infant feeding

Participants

Participants included expert scientists and programme managers from the African region (11), Asia (2), Latin America (1), the Caribbean (1), Europe (4) and the USA (2), HIV-infected mothers (2), collaborating agency scientists (6), representatives from non-governmental organizations implementing MTCT prevention programmes (6) and UN agencies (UNAIDS, UNFPA, UNICEF, WHO).

Background information

Background papers that were prepared for the consultation, presented in plenary sessions and discussed in the subgroups, included

- Munjanja S. Antiretroviral regimens for the prevention of MTCT: the programmatic implications.
- Farley TMM, Buyse D, Gaillard P, Perriens J. Efficacy of antiretroviral regimens for prevention of MTCT and some programmatic issues.
- Mofenson L, Munderi P. Safety of antiretroviral prophylaxis of perinatal transmission on HIV-infected pregnant women and their infants.
- Nájera R. MTCT and antiretroviral drug resistance.
- Fowler MG, Newell ML. Breastfeeding, HIV transmission and options in resource-poor settings.

These papers are available on the WHO and UNAIDS Web sites⁶ together with a summary of information presented during the discussion.

The conclusions and recommendations from this meeting follow. They will be reconsidered as new information becomes available.

Conclusions and recommendations on the use of antiretrovirals

Short-term efficacy of ARV prophylactic regimens

Several antiretroviral regimens evaluated in randomized controlled clinical trials showed short-term efficacy, as determined by infant infection status at 6–8 weeks. This reflects the reduction of in utero, intrapartum and early postpartum transmission.

- The drugs used in the effective antiretroviral prophylaxis regimens evaluated included Zidovudine (ZDV) alone, ZDV + Lamivudine (3TC), and Nevirapine.
- All regimens include an intrapartum component, with varying durations of antepartum or postpartum treatment or both.
- The most complex effective regimen includes antepartum, intrapartum, postpartum ZDV, while the simplest effective regimen includes single-dose intrapartum and postpartum Nevirapine.
- The mechanisms by which these regimens provide protection against mother-to-child HIV transmission include decrease of viral replication in the mother or prophylaxis of the infant during and after exposure to virus or both.

Long-term efficacy of ARV prophylactic regimens

Short-course ZDV, ZDV + 3TC, and Nevirapine have been evaluated in breastfeeding populations. Long-term efficacy as measured by infant infection status through 12 to 24 months has been demonstrated for short-course ZDV and Nevirapine regimens, showing that the early reduction in HIV transmission persists despite continued exposure to HIV during breastfeeding. Analysis of long-term efficacy of the ZDV + 3TC regimens is in progress.

Safety of ARV prophylactic regimens

Short-term safety and tolerance of the effective antiretroviral prophylactic regimens has been demonstrated in all the controlled clinical trials, while collection of long-term safety data is ongoing.

- In the controlled clinical trials, the effective antiretroviral prophylaxis regimens have not been associated with an excess of severe adverse events (including mortality) compared with the control arms in HIV-infected women or their children.
- Normal growth, neurologic development and immunologic parameters have been demonstrated in industrialized countries in uninfected children with in utero and neonatal exposure to ZDV compared with those without such exposure.
- HIV-related disease progression in mothers does not appear to be altered by receipt of prophylactic antiretroviral regimens.
- There have not been significant differences in HIV disease progression or mortality in children who became infected despite receipt of prophylaxis compared with infants who became infected in the control arms in the clinical trials.
- In the randomized, controlled clinical trials the only adverse effect attributable to drug exposure was mild transient anaemia in infants receiving ZDV-containing regimens.
- Mitochondrial dysfunction has been reported to occur in a small number of infants in France exposed in utero or neonatally to nucleoside reverse transcriptase inhibitor (ZDV or ZDV/3TC), but no similar findings were reported following an extensive review of deaths in a cohort of 16,000 infants in the USA, nor in the PETRA study. However, neither of these studies did specific laboratory assessment for mitochondrial dysfunction. Non-nucleoside reverse transcriptase inhibitor drugs, like Nevirapine, do not inhibit mitochondrial DNA polymerase and therefore should not be associated with such toxicity.

Conclusion: The WHO Technical Consultation concluded that benefit of these drugs in reducing mother-to-child HIV transmission greatly outweighs any potential adverse effects of drug exposure.

Selection of resistant viral populations

Selection for pre-existing resistant viral populations or development of new mutations may occur with all antiretroviral drugs or drug regimens that do not fully suppress viral replication. However, this is more likely to occur rapidly with drugs in which a single mutation is associated with development of drug resistance; such drugs include 3TC (with and without concomitant ZDV treatment) and Nevirapine. Virus containing drug-resistant mutations decreases in amount once antiretroviral drug prophylaxis is discontinued, and wild-type virus dominates. However, the mutant virus may remain present in an individual at very low levels.

- This could decrease antiviral effectiveness of future treatment with antiretroviral regimens that contain the same drug, or drugs within the same class, as that used for prophylaxis.
- It is unknown if such low-level drug resistance would affect the efficacy of the antiretroviral prophylaxis regimen if used in a subsequent pregnancy.
- There is currently no evidence that drug-resistant viruses are more transmissible than non-resistant viruses.
- There are currently no data to indicate that drug-resistant viruses are more virulent than non-resistant viruses.

Conclusion: The WHO Technical Consultation concluded that the benefit of decreasing mother-to-child HIV transmission with these antiretroviral drug prophylaxis regimens greatly outweighs concerns related to development of drug resistance.

Women who receive a suboptimal antepartum regimen

For antiretroviral prophylaxis regimens that include an antepartum component, the minimum duration of antepartum treatment necessary for protection is not defined. However, it is likely that a major mechanism for effective antepartum prophylaxis is reduction in maternal viral load, which is likely to require at least 1 to 2 weeks of treatment.

Recommendation: For women receiving prophylactic regimens that include an antepartum component and who have received less than 2 weeks of ZDV antepartum treatment, prophylaxis with 6 weeks ZDV to the infant, intrapartum and postpartum ZDV + 3TC, or the two-dose Nevirapine regimen may be considered.

Scaling up MTCT-prevention programmes and choice of ARV regimen

Since the last WHO Technical Consultations on prevention of mother-to-child HIV transmission with antiretroviral prophylaxis, important new data have become available related to long-term efficacy and safety of these regimens. Additionally, longitudinal assessment has demonstrated that antiretroviral resistant virus detected at 6 weeks postpartum was no longer detectable when reassessed at 12 months postpartum. Furthermore, the presence of detectable resistant virus was not associated with either increased mother-to-child HIV transmission or increased mortality in infants who became infected despite prophylaxis.

Conclusion: The WHO Technical Consultation concluded that implementation of any of the antiretroviral prophylaxis regimens shown to be effective in randomized clinical trials (ZDV, ZDV + 3TC, or Nevirapine regimens) can be recommended for general implementation. There is currently no justification to restrict use of any of these regimens to pilot project or research settings.

Recommendation: The local choice for the antiretroviral prophylactic regimen to include in the standard package of care should be determined by issues of feasibility, efficacy and cost. Considerations that contribute to decisions regarding the composition of the standard prophylactic package include proportion of women attending antenatal care, time of initiation of antenatal care, frequency of antenatal visits, type of HIV voluntary counselling and testing available, logistics and acceptability of antiretroviral prophylaxis administration, and cost of drugs.

Recommendation: The prevention of mother-to-child HIV transmission should be part of the minimum standard package of care for women who are known to be HIV infected and their infants.

Conclusions and recommendations regarding infant feeding

Risks of breastfeeding and replacement feeding

The benefits of breastfeeding are greatest in the first 6 months of life (optimal nutrition, reduced morbidity and mortality due to infections other than HIV, and delayed return of fertility).

Exclusive breastfeeding during the first 4 to 6 months of life carries greater benefits than mixed feeding with respect to morbidity and mortality from infectious diseases other than HIV.

Although breastfeeding no longer provides all nutritional requirements after 6 months, breastfeeding continues to offer protection against serious infections and to provide significant nutrition to the infant (half or more of nutritional requirements in the second 6 months of life, and up to one-third in the 2nd year).

Replacement feeding carries an increased risk of morbidity and mortality associated with malnutrition and associated with infectious disease other than HIV. This is especially high in the first 6 months of life and decreases thereafter. The risk and feasibility of replacement feeding are affected by the local environment and the individual woman's situation.

Breastfeeding is associated with a significant additional risk of HIV transmission from mother to child as compared to non-breastfeeding. This risk depends on clinical factors and may vary according to pattern and duration of breastfeeding. In untreated women who continue breastfeeding after the first year, the absolute risk of transmission through breastfeeding is 10 to 20%.

The risk of MTCT of HIV through breastfeeding appears to be greatest during the first months of infant life but persists as long as breastfeeding continues. Half of the breastfeeding-related infections may occur after 6 months with continued breastfeeding into the 2nd year of life.

Evidence from one study indicates that exclusive breastfeeding in the first 3 months of life may carry a lower risk of HIV transmission than mixed feeding.

Recommendations

- When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended.
- Otherwise, exclusive breastfeeding is recommended during the first months of life.
- To minimize HIV transmission risk, breastfeeding should be discontinued as soon as feasible, taking into account local circumstances, the individual woman's situation and the risks of replacement feeding (including infections other than HIV and malnutrition).
- When HIV-infected mothers choose not to breastfeed from birth or stop breastfeeding later, they should be provided with specific guidance and support for at least the first 2 years of the child's life to

ensure adequate replacement feeding. Programmes should strive to improve conditions that will make replacement feeding safer for HIV-infected mothers and families.

Cessation of breastfeeding

There are concerns about the possible increased risk of HIV transmission with mixed feeding during the transition period between exclusive breastfeeding and complete cessation of breastfeeding. Indirect evidence on the risk of HIV transmission through mixed feeding suggests that keeping the period of transition as short as possible may reduce the risk.

Shortening this transition period, however, may have negative nutritional consequences for the infant, psychological consequences for the infant and the mother, and expose the mother to the risk of breast pathology, which may increase the risk of HIV transmission if cessation of breastfeeding is not abrupt.

The best duration for this transition is not known and may vary according to the environment or the age of the infant or both.

Recommendation: HIV-infected mothers who breastfeed should be provided with specific guidance and support when they cease breastfeeding to avoid harmful nutritional and psychological consequences and to maintain breast health.

Infant feeding counselling

Infant feeding counselling has been shown to be more effective than simple advice for promoting exclusive breastfeeding in a general setting. Good counselling may also assist HIV-infected women to select and adhere to safer infant feeding options, such as exclusive breastfeeding or complete avoidance of breastfeeding, which may be uncommon in their environment. Effective counselling may reduce some of the breast-health problems that may increase the risk of transmission.

Many women find that receiving information on a range of infant feeding options is not sufficient to enable them to choose and they seek specific guidance. Skilled counselling can provide this guidance to help HIV-infected women choose what is appropriate for their situation, to which they are more likely to adhere. The options discussed during counselling need to be selected according to local feasibility and acceptability.

The level of understanding of infant feeding in the context of MTCT in the general population is limited, thus complicating efforts to counsel women effectively. The number of people trained in infant feeding counselling is few relative to the need and expected demand for this information and support.

Recommendations

- All HIV-infected mothers should receive counselling, which includes provision of general information about the risks and benefits of various infant feeding options and specific guidance in selecting the option most likely to be suitable for their situation. Whatever a mother decides, she should be supported in her choice.
- Assessments should be conducted locally to identify the range of feeding options that are acceptable, feasible, affordable, sustainable and safe in a particular context.
- Information and education on mother-to-child transmission of HIV should be urgently directed to the general public, affected communities and families.
- Adequate numbers of people who can counsel HIV-infected women on infant feeding should be trained, deployed, supervised and supported. Such support should include updated training as new information and recommendations emerge.

Breast health

Evidence indicates that breast conditions including mastitis, breast abscess and nipple fissure may increase the risk of HIV transmission through breastfeeding, but the extent of this association is not well quantified.

Recommendation: HIV-infected women who breastfeed should be assisted to ensure that they use a good breastfeeding technique to prevent these conditions, which should be treated promptly if they occur.

Maternal health

In one trial, the risk of dying in the first 2 years after delivery was greater among HIV-infected women who were randomized to breastfeeding than among those who were randomized to formula feeding. This result has yet to be confirmed by other research.

Women who do not breastfeed or stop breastfeeding early are at greater risk of becoming pregnant.

Recommendation: HIV-infected women should have access to information, follow-up clinical care and support, including family planning services and nutritional support. Family planning services are particularly important for HIV-infected women who are not breastfeeding.

Notes

- ¹ WHO *Weekly Epidemiological Record* (1998) 73:313–320.
- ² *Replacement feeding* is defined as the process of feeding a child who is not receiving any breast milk with a diet that provides all the nutrients the child needs.
- ³ *Exclusive breastfeeding* is defined as giving an infant no other food or drink, not even water, apart from breast milk (including expressed breast milk), with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.
- ⁴ Available on UNAIDS Web site <http://www.unaids.org/publications/documents/mtct/index.html>
 - WHO/UNAIDS recommendations on the safe and effective use of short-course ZDV for prevention of mother-to-child transmission of HIV (*WHO Weekly Epidemiological Record* (1998) 73:313–320).
 - Technical Working Group Meeting to Review New Research Findings for the Prevention of Mother-to-Child Transmission of HIV. Geneva, 10–11 August 1999.
 - Use of Nevirapine to Reduce Mother-to-Child Transmission of HIV (MTCT). *WHO Review of Reported Drug Resistance*, Geneva, 24 March 2000.
- ⁵ Available on UNAIDS Web site <http://www.unaids.org/publications/documents/mtct/index.html>
 - HIV and Infant Feeding: A Policy Statement Developed Collaboratively by UNAIDS, UNICEF and WHO, May 1997.
 - HIV and Infant Feeding: A Guide for Health-Care Managers and Supervisors, Guidelines for Decision-Makers and Review of HIV Transmission through Breastfeeding. Jointly issued by UNICEF, UNAIDS and WHO, June 1998.
 - HIV and Infant Feeding: WHO, UNICEF, UNAIDS Statement on Current Status of WHO/UNAIDS/UNICEF Policy Guidelines, 4 September 1999.
- ⁶ Available on WHO Department of Reproductive Health and Research Web site: <http://www.who.int/reproductive-health/> and on UNAIDS Web site: <http://www.unaids.org/publications/documents/mtct/index.html>



PMCT TRAINING CURRICULUM

Module 3

CHILD NUTRITION

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Module 3

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Unit 1

Composition of breast milk

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Composition of breast milk

Introduction

Nutrition is crucial for normal growth and development of children. Breast milk provides sufficient nutrition for the first 6 months of life and continues to be an important component of the child's diet well into the second year.

The fact that there is HIV transmission through breastfeeding, and alternative feeding methods are not completely safe, makes nutritional counseling for the infant of the HIV-infected mother complicated.

In this unit we shall review nutrition guidelines for children unexposed and exposed to HIV.

Objective



3-1-1

By the end of this unit participants will have learned about the composition of breast milk and how it is suited to meet the nutritional requirements of babies.

They should be able to help a mother provide adequate nutrition for her child irrespective of the type of milk she chooses to use.



3-1-2

Make this statement



The gold standard in early childhood nutrition is breast milk—also referred to as human milk.



Go through composition of breast milk. Discuss with participants the factors that influence its composition. As you go through the factors, define them.



3-1-3

Factors that affect breast-milk composition

- ⇒ gestation at birth
- ⇒ period of lactation
- ⇒ time of day
- ⇒ in-feed variation

Discuss each one of these factors with the group and refer the participants to table 3.1.1.

Gestation at birth

The breast milk of women who deliver prematurely is different from that of women with a term delivery. Preterm milk has more protein and fat than does term milk, to meet the special needs of the rapidly growing infant.

Periods of lactation

The recognized periods of lactation in which variation in composition of breast milk occurs are

- ⇒ colostrum (1–5 days)
- ⇒ transitional (6–14 days)
- ⇒ mature milk (15 days onward)

Colostrum milk has a creamy yellow colour because of its high vitamin A content. Colostrum also has multiple factors that help the baby to adapt to extrauterine life. It has a higher concentration of protein, sodium and chloride (table 3.1.1) than does mature milk. Its concentration of carbohydrates is also lower.

In-feed variations—Milk at the beginning of a feed (foremilk) has a much lower fat content than that at the end of a feed (hindmilk). Foremilk satiates thirst. Hindmilk with its higher fat content ensures that a baby gets enough calories. Breastfeeding babies may fail to gain weight if they do not get enough hindmilk.

Table 3.1.1

Composition of breast milk, formula and unmodified cow's milk

	Colostrum	Mature breast milk	Formula	Unmodified cow's milk
Energy (kcal/100 ml)	67.0	75.0	65–70.0	66.0
Protein (g/100 ml)	2.3	1.1	1.7	3.5
Casein : whey	20 : 80	40 : 60	40 : 60	80 : 20
Fat (g/100 ml)	3.0	3.5–4.5	3.4	3.8
PUFA : SFA*	—	1.3 : 1	—	1 : 4
Lactose (g/100 ml)	NA	6.8	4.9	N/A
Carbohydrate (g)	5.3	7.0	7.6	4.8
Sodium (mEq/l)	6.8	6.5	7.0	25.0
Potassium (mEq/l)	—	14.0	16.9	35.0
Chloride (mEq/l)	—	12.0	12.4	29.0
Calcium (mg/l)	481.0	340.0	420.0	1170.0
Phosphorus (mg/l)	157.0	140.0	210.0	920.0
Iron (mg/l)	1.0	0.5	8.1	0.45
Vitamin A (mg/l)	1.6	0.6	—	0.3

* PUFA – polyunsaturated fatty acids; SFA – saturated fatty acids

NA – Not available

Content of breast milk



3-1-4



Discuss the content of milk.

Major components and contents

⇒ water content (largest constituent, 85%)

⇒ protein

⇒ carbohydrates

⇒ minerals

⇒ vitamins

⇒ immune factors



Water

3-1-5

Water is the most abundant component of breast milk; it forms 80 to 85% of the total volume. Human milk has a higher content of water than does the milk of other animals.

In Kenya 83% of breastfed babies receive water in the first month of life. This is not necessary. There is ample research to show that even in dry, hot conditions like those found in the desert, breastfeeding infants do not need additional fluids to maintain adequate hydration.



Energy content

3-1-6

The total energy of breast milk content is 65 kcal or 272 kJ per 100 ml. This is provided as carbohydrate in the form of lactose sugar and fat.



Lipids (fats)

3-1-7

Breast-milk lipids

⇒ are essential for growth and development

⇒ provide 35 to 55% of the energy requirements

⇒ provide essential fatty acids

Total fat content of breast milk

Review table 3.1.1 on the composition of milk. Note that the fat content of colostrum is 3 g/100 ml and 3.5–4.5 g/100 ml in mature milk. Preterm milk has a lipid content similar to term milk. Hindmilk also has a higher fat content than foremilk. The fat content of cow's milk is similar to mature milk at 3.8 g/100 ml.



Classification of lipids found in breast milk

3-1-8

Breast-milk lipids can be classified as

⇒ fatty acids

⇒ cholesterol

⇒ phospholipids

Fatty acids (glycerides) are the predominant fat in breast milk. They provide energy for the baby. Glycerides are further classified into short-, medium- and long-chain fatty acids. They may be further grouped as polyunsaturated fatty acids (PUFA), found mainly in plants and usually liquid at room temperature, and saturated fatty acids (SFA), found mainly in animals and usually solid at room temperature. Some of these PUFA, termed essential fatty acids, are essential in the diet of an infant.



Concept of essential fatty acids

3-1-9

Essential fatty acids are fats that the body cannot make and yet are essential for normal body function; they include

⇒ linoleic acid

⇒ linolenic acid

⇒ arachidonic acid

⇒ docohexanoic acid

These essential lipids are converted into long-chain PUFA in the body.



What are the functions of the essential fatty acids?

3-1-10

⇒ synthesize cell membrane lipids

⇒ synthesize inflammation mediators, which help fight infection

⇒ develop nerve cell, especially myelin sheaths

⇒ develop eyes

⇒ develop ears

In addition to these factors, it is thought that high intake of essential fatty acids may protect against heart disease. Breast milk has a higher content of PUFA to SFA than does cow's milk, to meet the needs of the growing infant.

The ratio of PUFA to SFA is 1.3 to 1 in human milk and 1 to 4 in cow's milk. A woman's diet affects the fat content of the milk she produces. A diet that is rich in polyunsaturated fats will result in breast milk that has high concentrations of PUFA while a diet that is rich in saturated fats will result in breast milk that has relatively high concentrations of SFA.

Cholesterol

Cholesterol and phospholipids are used to make cell membranes and coating for the nerves (myelin sheaths).

Breastfed infants have a higher level of serum cholesterol than non-breastfed babies. The cholesterol is important for neurological development. Consensus is that exposure to breast-milk cholesterol helps the body to become more efficient in metabolizing cholesterol and thus protect itself against arteriosclerosis. The cholesterol in breast milk is non-oxidized. It is slightly different in form from the oxidized saturated fats found in other animal products. It is thought that the oxidized form of cholesterol is hazardous.

A high-cholesterol diet in adulthood is associated with an increased risk of arteriosclerosis and subsequent risk of stroke or myocardial infarction (heart attack).

Digestion of milk fat

Breast milk has enzymes called lipases. These enzymes break down milk lipids into an easily absorbed form. The best described is the bile salt stimulated lipase (BSSL), which digests 40% of ingested fat. Under normal circumstances, lipids in our diet are digested by pancreatic lipase and bile salts. In the first 6 months of life, babies do not make adequate amounts of pancreatic lipases or bile salts and therefore benefit from the enzymes that are in breast milk.

Carbohydrates

The main type of carbohydrate in breast milk is lactose sugar. Breast milk has more lactose than other kind of animal milk at 6 to 7 g per 1 dl. Lactose influences calcium and water absorption. It provides 55% of the body's energy requirement. Oligosaccharides and glucose are other types of carbohydrate found in breast milk.

Lactose is preferentially used in metabolism by special tissues like those in the brain and the kidneys.

Protein content of breast milk

The total protein content in colostrum and preterm milk is higher than that in term milk. The protein content in colostrum is 1.8 to 2 g per 100 ml and 0.9 to 1.01 g per 100 mg in mature milk.



Milk proteins can be broadly classified into two categories, casein and whey.

Ask participants to tell you the properties of these proteins.

- Casein protein curdles in acid, making it harder to digest in the acidic content of the stomach.
- Whey protein remains soluble in acid, making it easier to digest.



Discuss the proportions of casein and whey proteins in breast milk as compared with other types of milk. Review the information presented in table 3.1.1.

The whey proteins in breast milk include

- ⇒ enzymes
- ⇒ immune factors and modulators
- ⇒ binding proteins
- ⇒ growth modulators



Now discuss growth modulators.

Growth modulators

Growth modulators are special proteins found in breast milk; they include the epidermal growth factor (EGF), the neural growth factor and others.

These factors modulate growth of specific organs, as the name implies. The EGF is the best-described factor. It promotes the maturation of epithelial surfaces, including lungs, eyes and gastrointestinal tract epithelium. The neural growth factor promotes maturation of the brain and nervous system.

The effect of EGF on the gastrointestinal mucosa is important. It induces maturation of gut epithelium, thus reducing migration of bacteria across the gut and absorption of macro molecules. It may help protect against infectious diarrhoea.

Breastfed babies grow faster than formula-fed infants, possibly because of the effects of these growth modulators.

Minerals



Mention that it will not be possible to discuss all minerals in detail.

Calcium and phosphorus (Ca : P ratio)

Calcium and phosphorus are essential for humans. Their functions include

⇒ mineralization of bone and teeth

⇒ muscle contraction

⇒ homeostasis of cell membranes

The appropriate calcium levels are maintained within highly controlled limits. In young babies the calcium-to-phosphorus ratio is affected by the dietary intake. The calcium-to-phosphorus ratio in human milk is 1 : 2.4 and 1 : 1.3 in cow's milk. The phosphorus level in cow's milk is over 6 times that in human milk while calcium levels are 3 times higher. Review table 3.1.1. A high intake of calcium and phosphorus is not optimal for newborns. Remember that the kidneys of newborns are still immature and their ability to handle solutes is limited. Babies who are fed on unmodified cow's milk are at risk of having a high level of serum phosphate, which leads to leaching of calcium from the bones and subsequent loss in urine as calcium phosphate. Muscle spasms and convulsions have been described in newborns fed on unmodified milk.

Iron



What is the role of iron in the body?

Iron is an essential mineral in our diet. It is an essential component of the haemoglobin complex of the red cell. Thus iron is essential for haemopoiesis (the formation of blood cells in the body) as well as for normal mental function. Persons deficient in iron suffer from anaemia. Their intellectual function may also be diminished. Iron is absorbed better from breast milk than from other types of milk or from formula.



3-1-11

Table 3.1.2**Concentration of iron and proportion absorbed from different types of milk**

Type of milk	Concentration (µg/dl)	Absorption (%)
Human	70–100	50
Cow	70	15
Formula	120	4

Zinc

Zinc is essential for the human body. It is an essential component of some of the enzymes in the body and it activates the enzymes. Zinc helps maintain the integrity of mucous membranes and helps maintain normal immune function. Babies with zinc deficiency fail to thrive, they may have skin rashes, and their immune responses are impaired. Zinc is most easily absorbed from breast milk, where the concentration is ~ 39.5 g/dl. The concentration of zinc in early milk is much higher than in later milk.

Although human milk has relatively lower levels of zinc than other kinds of milk, the zinc in breast milk is more easily absorbed—it is more bioavailable.



3-1-12

Table 3.1.3**Absorption of zinc from different types of milk**

Type of milk	Zinc absorption (%)
Human	41
Cow	28
Cow's milk formula	31
Soy formula	14

Vitamins

It will not be possible to discuss all the vitamins.



Find out what the participants know about

⇒ fat-soluble vitamins—A, D, E, K

⇒ water-soluble vitamins—B group, C



3-1-13

The concentration of fat-soluble vitamins in human milk is as shown in table 3.1.4.

Table 3.1.4
Vitamin content of breast milk

Type of vitamin	Concentration
Vitamin A	1898 IU / 100 ml
Vitamin D	22 IU / 100 ml
Vitamin E	colostrum 14.8 mg/l transitional 8.9 mg/l mature 2.4 mg/l

Note: Vitamin A: 1 µg = 3.3 IU

Vitamin D: 1 µg = 40 IU

The average concentration of vitamin A in breast milk is 280 IU/dl. Its high concentration in colostrum gives it its typical creamy-yellow colour. Vitamin A has multiple roles, which include maintaining the integrity of the mucous membranes and promoting cell-mediated immunity.

Other types of milk



Discuss what other kinds of milk are available for feeding babies:

⇒ cow's milk in unmodified formula

⇒ goat's milk

⇒ camel's milk

⇒ non-animal milk-based formula, such as soya-based milk



State that most available information is on cow's milk and types of formula. Ask the participants to compare cow's milk with breast milk. The participants can *list the differences*. (Refer to tables 3.1.1 and 3.1.5.)



3-1-14

Table 3.1.5**Comparison of different types of milk**

	Fat (g/dl)	Protein (g/dl)	Lactose (g/dl)
Human	3.8	0.9	7.0
Cow	3.7	3.4	4.8
Goat	4.5	2.9	4.1
Sheep	7.5	5.5	4.8
Camel	4.2	3.7	4.1

Breast milk is low in protein and high in lactose compared with other types of milk. It is adapted to the needs of the human newborn.

Cow's milk has much higher concentrations of protein than does breast milk. Use of non-human milk, especially unmodified cow's milk, leads to metabolic stress in the baby because the baby cannot metabolize the high content of protein. This stress is more pronounced in the preterm baby. Urea is the breakdown product of protein metabolism. Table 3.1.6 demonstrates the results of a study of blood urea in babies on different types of feeds in the first 3 months of life. The blood urea of babies on feeds other than breast milk was abnormally raised.

A high solute load that is typical of non-human milk stresses the kidneys of the newborn. Babies fed on non-human milk require additional water in their diet to enable them to excrete the increased solute.

Table 3.1.6

Results of a study of blood urea in babies aged 1 to 3 months according to the mode of infant feeding

Infant group	Babies observed (no.)	Blood urea + SE no. (mg/100 ml)	Babies with raised blood urea	
			no.	(%)
Breastfed	12	22.7 + 1.6	0	0
Artificial milk alone	16	47.5 + 2.0	12	75
Artificial milk + solids	33	51.9 + 1.8	29	88

Source: P. Davies and R. Saundes, *Archives of Disease in Childhood* (1973), 48:563.

Individual values > 40 mg/100 ml



Expected duration 1 hour 30 minutes.

Objective

By the end of this unit participants will have learned about the composition of breast milk and how it is suited to meet the nutritional requirements of babies

3-1-1

Breast milk

The gold standard in
early childhood nutrition is
human milk

3-1-2

Factors that affect the composition of human milk

- ◆ gestation at birth
- ◆ period of lactation
- ◆ time of day
- ◆ in-feed variation

3-1-3

Content of breast milk

- ◆ water
- ◆ protein
- ◆ carbohydrates
- ◆ minerals
- ◆ vitamins
- ◆ immune factors

3-1-4

Giving breastfeeding babies water

- ◆ 83% of breastfed babies in Kenya receive water in the first month of life
- ◆ Many health workers wrongly believe that water should be added to a baby's diet before the age of 6 months
- ◆ Likewise mothers wrongly believe that babies become thirsty and should be given water from a very early age

3-1-5

Energy content of breast milk

- ◆ Total energy content of breast milk is 65 kcal/100 ml (272 kJ/100 ml)
- ◆ Carbohydrates provide 55–65% of the energy requirements
- ◆ Fat provides 35–45% of the energy

3-1-6

Fat content of breast milk

- ◆ Essential for growth and development
- ◆ Provides 35–55% of the total energy requirements
- ◆ Provides essential fatty acids
- ◆ Fat content varies with stage of lactation
 - ◆ colostrum 3 g/100 ml
 - ◆ mature milk and preterm milk 3.5–4.5 g/100 ml

3-1-7

Types of lipids in breast milk

- ◆ Short-, medium- and long-chain fatty acids—also called glycerides
 - ◆ polyunsaturated fatty acids (PUFA) (abundant in plants)
 - ◆ saturated fatty acids (SFA) (most abundant in animal products)
- ◆ Cholesterol
- ◆ Phospholipids

3-1-8

Essential lipids

These are lipids that the body cannot make and yet needs for essential functions

- linoleic acid
- linolenic acid
- arachidonic acid
- docohexanoic acid (DHA)

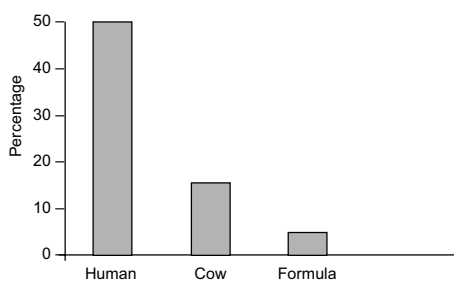
3-1-9

Functions of essential lipids

- ◆ constituents of cell membranes
- ◆ synthesis of inflammation mediators
- ◆ nervous tissue development
- ◆ eye development
- ◆ ear development

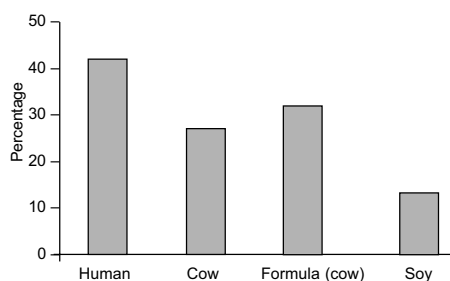
3-1-10

Iron absorption from breast and cow's milk



3-1-11

Absorption of zinc from milk



3-1-12

Concentration of selected vitamins in breast milk

Type of vitamin	Concentration in milk
Vitamin A	1898 IU/100 ml
Vitamin D	22 IU/100 ml
Vitamin E	colostrum – 14.8 mg/l transitional – 8.9 mg/l mature – 2.4 mg/l

3-1-13

Comparison of different types of milk (g/dl)

	Fat	Protein	Lactose
Human	3.8	0.9	7.0
Cow	3.7	3.4	4.8
Goat	4.5	2.9	4.1
Sheep	7.5	5.5	4.8
Camel	4.2	3.7	4.1

3-1-14

Unit 2

Immunology of breast milk

prepared by
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Immunology of breast milk



3-2-1

Objective

By the end of this unit the learner should be able to discuss the immunology of breast milk.



Ask participants to describe how breast milk prevents infection.

Anti-infective factors in breast milk

Breast milk has several factors that protect against infection, including

- ⇒ immune-competent cells
- ⇒ antibodies
- ⇒ soluble proteins

Cells

The immune competent cells in breast milk are live white blood cells. They can be categorized into macrophages, lymphocytes and polymorphonucleocytes.



3-2-2

Functions of immune-competent cells in breast milk

The functions of the immune competent cells include

- ⇒ ingesting harmful micro-organisms
- ⇒ synthesizing antibodies
- ⇒ synthesizing other soluble molecules and enzymes that are essential for the immune responses

Antibodies

The most abundant immunoglobulin in breast milk is secretory IgA (sIgA). This is a dimeric molecule and is the most abundant immunoglobulin in breast

milk. A breastfed baby takes in about 0.5 g of sIgA per day. The sIgA protects the baby for all the various infections that the mother has experienced and has been able to make antibodies against. SIgA coats all the mucous membranes—gastrointestinal tract, urogenital system, respiratory system, different glands with a mucosal lining, and so on. At these surfaces the sIgA seals off the mucosal surface and makes it less permeable to foreign proteins including infectious agents.



Other proteins (soluble factors)

3-2-3

Enzymes and other proteins

A variety of enzymes and soluble factors in breast milk protect against infection. These include enzymes such as lysozymes that help in killing microorganisms and binding proteins such as lactoferrin, which binds free iron in breast milk, the B12 binding factor, and the folate binding factor. These factors bind free iron, B12 and folate, thus making them unavailable for the metabolism of micro-organisms that maybe found in the infant's gut.



3-2-4

Bifidus factor

The bifidus factor promotes growth of the bacterium *Lactobacillus bifidus*, which is the normal bacterial flora of the gut and other mucous membranes such as the genital tract. These bacteria populate these surfaces and crowd out other bacteria that are pathogenic to the host. *L. bifidus* uses lactose for its metabolism and in the process makes lactic acid. This creates an acidic environment that is unfavourable for pathogenic bacteria, especially *E. coli*, the bacterium that most commonly causes infection in the newborn.



3-2-5

Anti-infective agents

Examples of anti-infective agents in breast milk include interferon and lactoperoxidase, which help to kill viruses and other microorganisms. They complement antibodies to help to kill micro-organisms.

Gastric acidity and emptying

Breastfed babies have a short intestinal transit time and empty their bowels frequently. Faster gastric emptying means faster return of gastric acidity, which prevents bacterial overgrowth.



Lower risk of infection

3-2-6

In summary, breast milk prevents infections by facilitating

⇒ development of the immune system

⇒ maturation of epithelial surfaces

⇒ coating of epithelial surfaces

Breast milk protects against all these conditions

⇒ gastrointestinal infection

⇒ ear infection

⇒ bacteraemias

⇒ infection in newborn—sepsis, necrotizing enterocolitis (NEC)

⇒ lower respiratory tract infection

Breastfed babies are hospitalized less often than babies fed on other kinds of milk.



3-2-7

Table 3.2.1

Risk of death from infectious causes in non-breastfed babies compared with breastfed babies

Age group	Odds ratio	95% confidence interval
< 2 months	5.8	3.4–9.8
2–3 months	4.1	2.7–6.4
4–5 months	2.6	1.6–3.9
6–8 months	1.8	1.2–2.8
9–11 months	1.4	0.8–2.6

Deaths from non-infectious causes and first-week deaths are excluded.



3–2–8

Table 3.2.2

Risk of death from diarrhoea and acute respiratory infections in non-breastfed babies compared with breastfed babies

Age group	Protection against diarrhoea odds ratio (95% CI)	Protection against acute respiratory infections odds ratio (95% CI)
1 week–6 months	6.1 (4.1–9.0)	2.4 (1.6–3.5)
6–11 months	1.9 (1.2–3.1)	2.5 (1.4–4.6)

Deaths from non-infectious causes and first week deaths are excluded.

CI – confidence interval



Duration 30–45 minutes.



3–2–9

Necrotizing enterocolitis

In a British study of 962 preterm infants, the overall prevalence of NEC was 5.5% with a case fatality of 26%. Exclusively breastfed babies had the lowest incidence of NEC. NEC was 6 to 10 times higher in babies fed exclusively on formula compared with those who were exclusively breastfed. NEC was 3 times more frequent in babies who were fed on a mixture of breast milk and formula.

Review tables 3.2.1 and 3.2.2

- Breastfeeding protected babies from dying.
- The protection was more for the younger infants.
- Breast milk offered protection against diarrheal disease.

Objective

By the end of this unit the learner should be able to discuss the immunology of breast milk.

3-2-1

Functions of immune-competent cells in breast milk

- ◆ Immune-competent cells in breast milk have several functions:
 - ingest harmful organisms
 - synthesize antibodies other soluble molecules and enzymes

3-2-2

Enzymes and other proteins

- ◆ Enzymes
 - lysozymes, which help kill bacteria
- ◆ Binding proteins
 - lactoferrin
 - B12 binding factor
 - folate binding factor

3-2-3

Bifidus factor

The bifidus factor promotes the growth of the bacterium *Lactobacillus bifidus*. This bacterium in turn creates an environment that is unfavourable for pathogenic bacteria.

3-2-4

Anti-infective factors in breast milk

- ◆ Immune-competent cells; they include
 - macrophages
 - lymphocytes
 - polymorphonucleocytes
- ◆ antibodies
- ◆ soluble factors

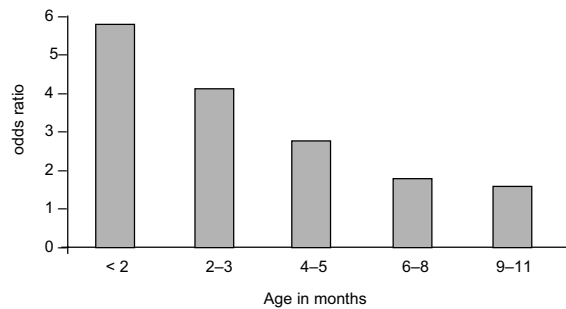
3-2-5

Breast milk protects against all these conditions

- ◆ diarrhoea
- ◆ otitis media
- ◆ bacteraemia
- ◆ respiratory infections
- ◆ hospitalization
- ◆ neonatal sepsis
- ◆ necrotizing enterocolitis

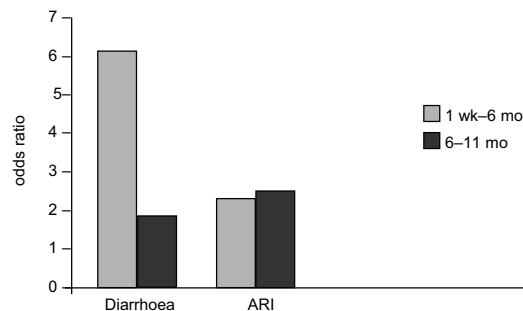
3-2-6

Risk of infectious death in non-breastfed babies



3-2-7

Risk of diarrhoea and ARI death in non-breastfed babies



3-2-8

Necrotizing enterocolitis

British study of 962 preterm infants

- ◆ Prevalence of NEC overall was 5.5% with a case fatality of 26%.
- ◆ The prevalence of NEC was 6–10 times higher in bottlefed babies than in exclusively breastfed babies.
- ◆ NEC was 3 times more common in babies on mixed breast and formula feeding.

3-2-9

Unit 3

Infant feeding choices for the HIV-infected mother

3

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Infant feeding choices for the HIV-infected mother

Introduction

All parents irrespective of their HIV status have a right to choose the type of feeding for their child. Preferably they make this choice after they receive adequate information from health workers—that is, their choice should be an informed one. While promoting informed choice, we must be aware of the extra need to continue protecting, promoting and supporting breastfeeding for HIV-negative couples or where serostatus is unknown.

Objective

Health workers should understand and be able to counsel on the different feeding options for HIV-infected women. They should be able to state the advantages and disadvantages and the costs while at the same time not giving this same advice to HIV-negative women.

 How does the health worker help the mother or the parents make the choice?

 **Give facts** on how breastfeeding can contribute to MTCT.



Key facts about breast-milk transmission of HIV

3-3-1

- Breast milk from HIV-infected women frequently has the HIV virus.

3-3-2

- Many studies have shown that there is breast-milk transmission of HIV.
- Breast-milk transmission contributes significantly to MTCT of HIV and is responsible for 30 to 50% of the overall infections to babies of HIV.
- Remember that transmission is not 100%. Not all HIV-infected mothers who breastfeed transmit the virus to their babies.
- Some mothers are more likely to transmit than others. These include women with AIDS and newly infected women.



3-3-3



Discuss the importance of voluntary counseling and testing as an entry into interventions to prevent breast-milk transmission of HIV.

Discuss the importance of involving the spouse in decision-making.

State that the rest of the session will be spent on different options available.

Feeding options for infants exposed to HIV

The two options for infant feeding are

⇒ breastfeeding

⇒ replacement feeding

Women should be allowed to make an informed choice and then be supported to feed their babies safely.



3-3-4



A mother who chooses to breastfeed her child should be supported and guided through this decision.



Ask participants to give reasons why mothers may choose this option despite being adequately informed.



Some of the reasons will be concerns about

⇒ stigma, culture

⇒ confidentiality

⇒ cost

⇒ mother satisfaction



3-3-5

HIV-infected women who opt to breastfeed should be encouraged to do so exclusively. Mixed feeding increases the risk of transmission. Outlined here are issues related to breastfeeding and HIV transmission.



Exclusive breastfeeding and HIV transmission

3-3-6

Exclusive breastfeeding

3-3-7

Advantages of exclusive breastfeeding

- Breast milk has all the nutrients required for the growth of an infant in the first 6 months of life.
- Breast milk has immunologic factors that protect the baby from infections.
- The process of breastfeeding promotes bonding of the infant with the mother.
- Breast milk is available at no additional monetary cost.

Disadvantage

- The breast milk of an HIV-infected women has the virus and babies who are exposed may become infected.



Duration of breastfeeding and HIV transmission

3-3-8

Part of the strategy to reduce the risk of breast-milk transmission of HIV is to encourage HIV-positive women who opt to breastfeed to shorten the length of time they do so.

- Shortening the duration of breastfeeding reduces the risk of late transmission but does not reduce the risk during early breastfeeding.
- Normally we encourage mothers to breastfeed their babies into the second year of life. In that year, breast milk can provide up to 50% of the caloric requirements of the child. Infants with shortened duration of breastfeeding will require a nutritionally balanced diet to ensure normal growth.

Wet nursing or surrogate breastfeeding

A baby may be breastfed by a woman other than the mother. This is termed wet nursing or surrogate nursing. In the local setting, is this

⇒ feasible?

⇒ acceptable?

⇒ available?



How do you choose a wet nurse?

3-3-9

A wet nurse should be free of HIV infection. She should therefore go through

VCT to determine that she is HIV free. She should be counseled on how to reduce risk for herself, to ensure that she remains free of HIV infection through the period of wet nursing.

There is a small risk of infection for the wet nurse if the infant is infected.

Other strategies for reducing breast-milk transmission of HIV in a breastfeeding infant

One can further reduce the risk of breast-milk transmission of HIV by heat treating expressed breast milk or by ensuring good breastfeeding techniques.



Expressing and heat treating milk

3-3-10

For this you need to explain how to express breastmilk.

3-3-11

How to treat the milk

- Bring the milk to a boil and then cool it precipitously. This is easier and better for the milk because there is less denaturation of the proteins including anti-infectious factors than in pasteurization.

OR

- Heat the milk to 56 °C for 30 minutes. This is called Holder's pasteurization.
- Both methods of heat treating the breast milk kill the HIV virus.

Breastfeeding techniques

Cracked nipples, mastitis and breast abscess significantly increase the risk of transmitting HIV through breastfeeding. Good breastfeeding technique can reduce this risk considerably. The technique has already been discussed in module 2 unit2, 'Antenatal preparation for lactation'.

- When would you discourage a mother who chooses to breastfeed from doing so?
- There will be mothers who change their minds, that is, they will decide to stop breastfeeding. How would you manage them?

See also Unit 4, 'Complementary feeding'.



3-3-12

Choosing replacement feeding

Start by defining



Definition of replacement feeding

Replacement feeding Feeding a child who is not receiving any breast milk with a diet that provides all the nutrients that a child needs.



3-3-13



Definition of breast-milk substitutes

Breast milk substitute Any milk or other liquid and food used in place of mother's milk whether nutritionally adequate or not.

During the first 6 months of a baby's life, replacement feeding should be made with a suitable breast-milk substitute.

In the second half of infancy (6–12 months) babies require appropriate weaning foods in addition to milk feeds.

Then point out:

- Replacement feeding is necessary when a mother chooses not to breastfeed.
- After a time it may be difficult to reverse the decision and be able to breastfeed.
- The mother needs a lot of support and assistance from health workers. This support should last throughout the period during which breastfeeding is recommended.



3-3-14

3-3-15

Ideally the risk of giving replacement feeding should be less than the risk of HIV transmission. Priority should be given to the mother's or the couple's choice.



How do we calculate these risks?

Work through suggested alternatives with the mother.

- Let the mother suggest what she knows.
- Then discuss whether what is suggested is suitable or not, and if suitable, what are the advantages, disadvantages and costs involved?

Review the discussion of different kinds of milk in unit 1 in this module, 'Composition of breast milk'. Most mothers are not aware of what safe alternatives there are. You will need to present that information to any mother you are counseling.

At this stage discuss possible replacement feeds.


Let participants suggest a list. Have them group items into 'suitable' and 'unsuitable' and give reasons for doing so with each suggestion.



3-3-16

Unmodified cow's milk

Suitable		Unsuitable	
Whole milk	— fresh	Skim milk	— fresh
	powdered		powdered
Evaporated milk	— unsweetened	Evaporated milk	— sweetened

What about other types of milk?

Discuss these if they are used in the community.

⇒ goat

⇒ sheep

⇒ camel

Breast-milk substitutes

Suitable	Unsuitable
Cow's milk-based formula	Skim milk— fresh
Soya-based formula	powdered
Specialized formula	Evaporated milk—sweetened
Whole animal milk	Flavoured milk drinks
	Coconut milk
	Juices, tea, sugar drink,
	Cereals, porridge



3-3-17

3-3-18

3-3-19

3-3-20

3-3-21

Key points to remember about animal milk that need to be discussed with the mother



Proteins in non-human milk

3-3-22 Animal milk has a higher content of protein than human milk. It is therefore harder to digest.



Salt in non-human milk

3-3-23 Non-human milk has a higher concentration of salt. Babies who are fed on non-human milk will require additional water.



Energy calories in non-human milk

3-3-24 Animal milk has a lower calorie content, particularly after it is diluted to reduce the concentration of salt and protein. Sugar should be added to ensure adequate calorie intake.



Deficiencies in animal milk

3-3-25 Animal milk lacks some of the essential fatty acids and vitamins. Babies on animal milk will therefore require micronutrient supplementation.

Bacterial contamination

Animal milk is easily contaminated and requires careful preparation and storage to minimize this risk.



How do you prepare suitable milk?

Methods of making animal milk more suitable for infant feeding



3-3-26 The following methods make animal milk more suitable for infant digestion:

⇒ pasteurization

⇒ boiling

⇒ homogenization

⇒ evaporation

These processes modify the casein and make it more digestible.

Pasteurization and boiling reduce the bacterial load of the milk.

Using commercially prepared formula milk (modified infant formula)



3-3-27

Characteristics of commercially prepared formula

- It is modified from cow's milk or soya.
- It tries to mimic breast milk in the content of different nutrients.
- It is fortified with micronutrients (vitamins and minerals) to meet the basic requirements of an infant.



3-3-28

Preparation of commercially prepared formula

- It is commonly available as a powder and needs reconstitution.
- Mothers need to observe strict hygiene.
- Mothers need to be able to follow the instructions on the tin, which may not be very clear.



3-3-29

Cost of commercially prepared infant formula

Modified infant formula is expensive and in poor households mothers who find they are unable to sustain the supply may try to dilute the milk too much.



3-3-30

Coping with limited amounts of commercially formulated infant formula

Mothers should be advised about what to do in case they run out of infant formula. Some options:

- Give whole cow's milk.
- Plan to give the modified infant formula for the most critical time period (first 4 to 6 months) and then switch to a full-cream product, which is much cheaper.

Home modification of animal milk



3-3-31

Home modification of animal milk in the first 3 months of life

The milk fed to an infant 1 to 3 months old needs to be diluted and then fortified with sugar to increase the calorie content:

2 portions of milk + 1 portion of water + sugar to taste. Boil the mixture before feeding it to the infant.

Example

To make 90 ml of milk mix

60 ml of milk + 30 ml of water + 1 heaped teaspoonful of sugar (sugar to taste)



3-3-32

Home modification of animal milk for the infant 3 to 6 months old

A baby 3 to 6 months old should be fed on milk only; the milk should not be diluted.

1 cup of milk + 1 teaspoonful of sugar (sugar to taste)

Boil the mixture before feeding it to the infant.



3-3-33

Home modification of animal milk for the infant over 6 months old

The baby over 6 months old should continue to have milk feeds. Complementary feeds now need to be added.



Discuss with the participants the amount of milk that babies should receive. How does a mother know she is feeding her baby adequately?

The baby will gain weight and should pass urine 7 to 8 times in a 24-hour period.

Babies should be fed on demand and to their satisfaction. Therefore you need to instruct the mother on the need to prepare feeds ahead of time. Boiling hot milk kept in a thermos flask is safe for 4 to 6 hours. If the milk is kept longer, its temperature drops to a level that will support bacterial replication, and feeding it will increase the risk of diarrhoeal disease.

Fortification of non-human milk

? What micronutrients are needed for the infant fed on unmodified animal milk?

 Let participants list:

- ⇒ iron
- ⇒ zinc
- ⇒ vitamin A
- ⇒ vitamin C
- ⇒ folic acid

How can these be supplied?




3-3-34

These micronutrients can be provided as a micronutrient supplementation. Health workers should familiarize themselves with the preparations available in their locale.

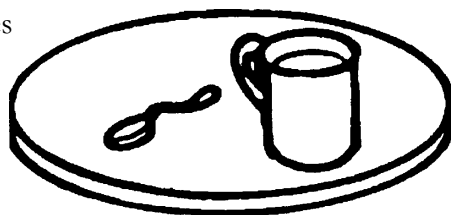
Feeding techniques



3-3-35

 Now discuss feeding techniques. Ask participants to list them.

Mothers should be encouraged to feed their infants with a cup and spoon or a cup alone. Bottles and covered cups with spout should be discouraged because they are difficult to keep clean and are a potential source of infection for the infant.




Demonstrate the technique of feeding a baby with a cup. The baby should be held in a relatively upright position. The mouth of the cup is placed on the baby's tongue. The cup is tilted to allow a few drops of milk to flow onto the tongue as the baby feeds.

Who feeds the baby?

Artificial feeding has many potential problems. The mother should be encouraged to feed the baby to ensure high standards of hygiene and emotional stimulation of her baby.

Logistics of managing replacement feeds

? What do you need to make up the milk at home?

 Discuss

- ⇒ what is the mother going to use to measure the ingredients?
- ⇒ management of night-time feeds
- ⇒ efficient use of fuel

Costs of replacement feeding

Now that you have identified the options available, it is important that the client understands the costs involved.

Basically these are of two types:

- ⇒ costs that are hidden or difficult to calculate
- ⇒ quantifiable costs

Hidden costs and savings

Ask participants to give hidden costs and savings.

- For **breastfed infants**

- ⇒ What is the cost of treating those who get HIV infection? (drugs, time in hospital, loss of working hours, and so on).
- ⇒ How many are protected from other infections because of breastfeeding?

- For **non-breastfed children**

- ⇒ How many are saved from getting HIV infection?

- ⇒ How many fall sick because of lack of the protection that breast milk gives?
- ⇒ How many are exposed to long-term problems such as allergies?
- Does the health of an HIV-infected mother deteriorate with breastfeeding?
 - ⇒ Participants can observe when they are practising.

Quantifiable costs

- ⇒ utensils
- ⇒ fuel
- ⇒ time
- ⇒ milk to be used

Give quantities needed for first 6 months.

Use current costs to calculate sum needed.

An infant requires 44 tins of commercially prepared formula or 92 litres of fresh milk for the first 6 months of life.

- ⇒ additional micronutrients

Get market values of locally available multivitamins and iron.

Management of the mother who chooses not to breastfeed



How do you manage the mother who chooses not to breastfeed?



What are the anticipated problems?

- ⇒ breast engorgement and related problems
- ⇒ social pressure



Discuss what can be done to stop milk production.

Measures that work

- Support breasts well.

- Express small amounts of milk to relieve engorgement.
- Use analgesics.

Measures that are not recommended

- Restrict fluids.
- Give pharmacological treatment:
 - ⇒ diuretics
 - ⇒ hormones

Social pressure

Counsel women on the types of problems they may encounter and how through discussion with family members ahead of time they can pre-empt some of the questions that will be raised.

Discuss

- ⇒ the different options for infant feeding
- ⇒ milk volumes required by the infant
- ⇒ cost of feeds
- ⇒ requirements to ensure safe feeds

Practicals: Let the participants break into four groups and discuss.

Format for discussion

Group	Task
Group 1	Develop a list of instructions that you will give a mother to help her maintain good hygiene in handling infant feeds; place particular emphasis on baby's water and food.
Group 2	<p>Visit the local shops and market and identify the locally available types of non-human milk.</p> <p>Show their nutritional value and commercial cost.</p> <p>Identify the types of locally available non-human milk that are suitable for homemade formula.</p> <p>Identify locally available vitamin preparations that would be suitable for fortification of the homemade formula.</p> <p>Prepare a set of instructions that you would give a mother to ensure that she prepares milk safely for her baby.</p> <p>Demonstrate in the plenary how you would prepare the milk.</p>

Group 3	<p>Visit the local shops and market and identify the locally available commercially made infant formulas.</p> <p>Show their nutritional value and commercial cost.</p> <p>Prepare a set of instructions that you would give a mother to ensure that she prepares milk safely for her baby.</p> <p>Demonstrate to the class how you would prepare the milk.</p>
Group 4	<p>List the types of difficult questions that a mother will be faced with if she is not breastfeeding and propose possible answers to these questions.</p> <p>Develop a list of issues that you would discuss with the mother in preparation for this type of challenge to her choice of infant feeding.</p>
Plenary	<p>Each group will present to the whole group, and in discussion all will try to reach consensus about how best to cope with the situations posed.</p>

The facilitator should prepare ahead for the plenary session by providing a variety of suitable and non-suitable utensils and types of milk that are commonly available in the locality.

Guidelines for group work



Discuss the following points:

- ⇒ judging the *purchasing power* of the client
- ⇒ making the best of *limited resources*
- ⇒ checking that the mother has understood the instructions and can *make the feeds safely*
- ⇒ actively *developing a support network* for HIV-infected mothers during this period

Practicals require at least 3 to 3 1/2 hours. The assignment can be given as homework and the class time used to discuss the output of each group.

Breast milk and HIV transmission

- ◆ Breast milk from HIV-infected women frequently has the HIV virus.
- ◆ Many studies have shown that there is breast-milk transmission of HIV.

3-3-1

Mother-to-child transmission of HIV-1

- ◆ Breastfed 30–35%
- ◆ Formula fed 12–25%
- ◆ Formula fed and AZT < 8%

3-3-2

Public health implications of breast-milk transmission of HIV-1

- ◆ HIV-1 has increase childhood mortality by 30% (Kenya Demographic Health Survey 1998).
- ◆ 20–60% of paediatric admissions are due to high HIV in the high HIV seroprevalence areas.
- ◆ HIV has increased the case fatality of common infections.

3-3-3

Infant feeding choice

- ♦ Many poor women with HIV do not have access to other kinds of milk
- ♦ Breast milk maybe the only food available to the infant.

3-3-4

Strategies for reducing HIV transmission in a breastfeeding baby

- ♦ exclusive breastfeeding in the first few months of life
- ♦ shortened breastfeeding duration
- ♦ good breastfeeding technique to avoid cracked nipples, mastitis, breast abscess
- ♦ surrogate breastfeeding

3-3-5

Exclusive breastfeeding and HIV transmission

One study has shown that exclusively breastfed babies have a lower risk of HIV infection than babies on mixed feeding.

3-3-6

Timing of breast-milk transmission of HIV

- ◆ Most breast-milk transmission of HIV takes place in the first 6 months of life.
- ◆ Babies continue to be at risk of HIV infection as long as they breastfeed.

3-3-7

Shortened duration of breastfeeding

- ◆ Shortening the duration of breastfeeding will reduce the risk of HIV transmission.
- ◆ Beyond the newborn period, babies can be safely fed with other foods.
- ◆ HIV-infected women should be encouraged to wean early.

3-3-8

Surrogate breastfeeding

- ◆ Surrogate breastfeeding is well accepted in many cultures.
- ◆ Wet nurse must be willing to be screened for HIV and be at low risk of seroconversion
- ◆ there is a small risk of the wet nurse being infected while feeding an infected baby.

3-3-9

Strategies for reducing HIV transmission in a breastfeeding baby (2)

Heat treatment of breast milk

- ◆ pasteurize the breast milk
- ◆ cool precipitously to room temperature

3-3-10

Heat treatment of breast milk

- ◆ Boiling or pasteurizing breast milk kills the HIV virus.
- ◆ An HIV-infected woman may be counseled to express her milk and boil it before feeding her infant.
- ◆ Heat treatment destroys some of the anti-infective factors of breast milk.

3-3-11

Replacement feeding

This is the process of feeding a child who is not receiving any breast milk with a diet that provides all the nutrients that a child needs.

3-3-12

Breast-milk substitutes

Any milk or other liquid food used in place of mother's milk whether nutritionally adequate or not.

3-3-13

Key counseling points for replacement feeding

- ♦ different options
- ♦ milk volume required by the infant
- ♦ cost of the feeds
- ♦ requirements to ensure safe feeds

A woman should be allowed to make an informed choice and then supported to feed her baby safely.

3-3-14

Counseling on the choice of replacement feeds

Discuss the advantages and disadvantages of replacement feeding:

- ♦ reduced risk of HIV transmission
- ♦ increased risk of infections
- ♦ expense of replacement feeding compared with breastfeeding

3-3-15

Types of unmodified milk

- ◆ Unmodified animal milk (cow, goat, sheep, camel)
 - whole milk (liquid, powder, evaporated liquid)
 - skim milk (liquid, powder, evaporated liquid)

3-3-16

Modified milk

- ◆ cow's milk formula
- ◆ soy milk formula
- ◆ special formulas
- ◆ home-modified formula

3-3-17

Other types of milk and fluids

- | | |
|----------------|------------|
| ◆ coconut milk | ◆ water |
| ◆ fruit juices | ◆ cereals |
| ◆ sugar drink | ◆ porridge |

3-3-18

Suitable replacement feeds

- ♦ modified infant formula
- ♦ home modification of whole cow's milk
- ♦ full cream milk

3-3-19

Unsuitable replacement feeds

- ♦ skim milk
- ♦ fermented milk, yogurt
- ♦ coconut milk
- ♦ fruit juices
- ♦ sugar drink, water
- ♦ cereals, porridge

3-3-20

Condensed milk and dry skim milk

- ♦ Condensed milk and dry skim milk are unsuitable for feeding the newborn because of their high protein and salt load.
- ♦ Acid milk and fermented milk are easy to digest but may cause metabolic acidosis.

3-3-21

Proteins in non-human milk

- ♦ Animal milk has a higher content of proteins.
- ♦ Whole and evaporated animal milk provides 3.4 g/kg of protein compared with 2.5 g/kg in breast milk.

3-3-22

Salt in non-human milks

- ♦ Non-human milk has a higher concentration of salt.
- ♦ Babies who are fed on non-human milk have a high urine osmolarity.

3-3-23

Calories in non-human milk

- ♦ Animal milk has a lower calorie content than breast milk. Adding sugar improves the calorie content (add sugar to taste).
- ♦ Animal milk lacks some of the essential fatty acids.

3-3-24

Deficiencies and problems in animal milk

- ◆ Animal milk lacks essential vitamins and minerals.
- ◆ Goat milk is more easily digested than cow's milk.
- ◆ Goat milk lacks vitamin D and folate—babies fed only on goat milk may get rickets and megaloblastic anaemia.
- ◆ Animal milk is easily contaminated by bacteria.

3-3-25

Methods of making animal milk more suitable for infant feeding

- ◆ pasteurization
- ◆ homogenization
- ◆ boiling
- ◆ evaporation

These processes modify the casein and make it more easily digested.

Pasteurization and boiling reduce the bacterial load of the milk.

3-3-26

Commercially prepared formula milk (1)

- ◆ Modified from cow's milk or soya.
- ◆ Formulation tries to mimic breast milk.
- ◆ Fortified with many micronutrients to meet the basic requirements of the growing child.
- ◆ Other types of commercial milk are usually fortified with vitamins A and D.

3-3-27

Commercially prepared formula milk (2)

- ◆ Needs to be reconstituted with water.
- ◆ Mothers need to observe strict hygiene to avoid contamination of the feeds.
- ◆ Mothers need to be able to follow the instructions on the tin.

3-3-28

Commercially prepared formula milk (3)

Modified infant formula is expensive and in poor environments mothers maybe unable to sustain the supplies, leading them to over-dilute feeds.

3-3-29

Commercially prepared formula milk (4)

Mothers should be instructed on what to do in case they run out of milk

- ◆ Give whole cow's milk when they are out of their commercial formula supply.
- ◆ Plan to give commercial formula for the most essential period of time (first 3–4 months of life) and then switch to a cheaper full cream milk.

3-3-30

Home modification of animal milk (1)

For a 1–3-month-old infant, the milk needs to be diluted.

- ◆ 2 portions of milk + 1 portion of water + sugar, for example, 60 ml milk + 30 ml water + 1 teaspoonful of sugar
- ◆ boil the mixture before feeding the infant

3-3-31

Home modification of animal milk (2)

For a baby 3–6 months old, milk should not be diluted.

- ◆ 1 cup of milk + sugar to taste
- ◆ boil the mixture before feeding the infant

3-3-32

Home modification of animal milk (3)

> 6 months

- ◆ Complementary feeds should be added.
- ◆ The child should have 5–6 meals per day.
- ◆ Babies should continue to have milk in their diet.

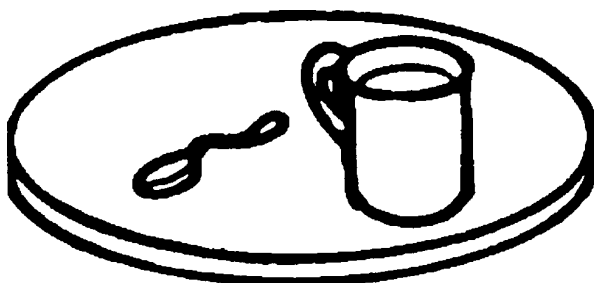
3-3-33

Home modification of animal milk (4)

Babies who are on home-modified milk
should be given multivitamins.

3-3-34

Feeding techniques



3-3-35

Unit 4

Complementary feeding

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Complementary feeding

↓ Introduction

Appropriate introduction of foods other than milk is essential for the growth and well-being of infants and young children. The aim is that by time children are 2 to 3 years old they learn to eat the family foods. But special preparations are necessary so that quantities taken can meet the child's nutritional needs. From the time complementary foods are introduced to the age of about 3 years the child is at risk of malnutrition and infection. This is the reason for the emphasis on the period of complementary feeding. In the context of HIV infection, a mother may opt to shorten the duration of breastfeeding. Such a child is nutritionally vulnerable.

🎯 Objective



3-4-1

By the end of this unit the participant should be able to

- ⇒ state the nutrient needs at different ages
- ⇒ give appropriate advice on frequency of feeding
- ⇒ advise on appropriate preparation of complementary foods



Introduce the following terms and tell the participants that you will continue to introduce new terms.



3-4-2

3-4-3



Definitions

Term	Definition
Infant and child feeding	The whole complex of dietary, behavioural and physiological process involved in the child's ingestion of food
Exclusive breastfeeding	All the child's fluid energy and nutrients are provided by breast milk. Medicines and vitamin drops may be added
Almost exclusive breastfeeding	Use of water or other non-nutritive liquids in addition to the breast milk
Partial breastfeeding	Mixed feeding, with breast milk plus other sources of energy and nutrients
Complementary feeding	Other foods or liquids provided along with breast milk
Complementary food	Any nutrient-containing foods or liquid given along with breast milk during the period of complementary feeding
Transitional foods	Complementary foods especially designed to meet the particular nutritional needs of young children.
Family foods	Complementary foods that are the same as those consumed by the rest of the family
Weaning	Putting a complete stop to any breastfeeding

Nutritional needs of children



3-4-4



What are the nutritional needs of children?

State that the nutritional requirements of children in the first 2 years are divided into two age groups: up to 12 months, then 12 to 24 months.

Figures given are average. Some babies may need less and some more.

For energy and protein, old figures overestimated the needs as they were based on formula rather than breast milk.



3-4-5

Nutritional needs in the first year of life

Calculated per kilogram body weight per day

⇒ water: 150–200 ml

⇒ energy: 120–130 kcal

⇒ protein: 2–3 g

Healthy women make 800 to 1500 ml of milk in a 24-hour period. Using table 3.1.1 in unit 1, Composition of breast milk, in this module, determine what proportion of these needs are provided by breast milk.



3-4-6

Nutritional requirements in the second year of life

⇒ water: 100 ml/kg per day

⇒ energy: 85 kcal/kg per day

⇒ protein: 8–9 g per day

Other nutritional requirements

Other nutritional requirements include

⇒ minerals

⇒ vitamins



3-4-7

Mineral requirements in the first year of life

Table 3.4.1**Recommended daily dietary intake of electrolytes and minerals in the first year of life (mg)**

	0–0.5 years	0.5–1 years	1–3 years
<i>Electrolytes</i>			
Sodium	115–350	250–750	
Potassium	350–925	425–1500	
Chloride	275–700	400–1200	
<i>Minerals</i>			
Calcium	400	600	800
Phosphorus	300	500	800
Magnesium	40	60	80
Iron	6	10	10
Zinc	5	5	10
Iodine	40	50	70
Selenium	10	15	20

Vitamin requirements in the first year of life

Table 3.4.2**Recommended daily dietary intake of fat-soluble and water-soluble vitamins in the first year of life**

	0–0.5 years	0.5–1 years	1–3 years
<i>Fat-soluble vitamins</i>			
Vitamin A (g of retinol equivalent)	395.0	375.0	400.0
Vitamin D (g)	7.5	10.0	10.0
Vitamin E (mg of tocopherol equivalent)	3.0	4.0	6.0
Vitamin K (g)	5.0	10.0	15.0
Biotin (g)	10.0	15.0	
Pantothenic acid (mg)	2.0	3.0	
<i>Water-soluble vitamins</i>			
Vitamin C (mg)	30.0	35.0	40.0
Thiamin (mg)	0.3	0.4	0.7
Riboflavin (mg)	0.4	0.5	1.1
Niacin (mg)	5.0	6.0	12.0
Vitamin B6 (mg)	0.3	0.6	1.1
Folacin (g)	25.0	35.0	50.0
Vitamin B12 (g)	0.3	0.5	0.7

The vitamin requirements are not calculated on the basis of the child's size but are given as the daily requirements.

Vitamin A supplementation has been shown to play a role in reducing morbidity and mortality in children and adults. Various studies have shown that vitamin A deficiency is very common in sub-Saharan Africa, occurring in up to 50% of women and children. Supplementing with vitamin A in disease and health is therefore an important strategy for improving maternal and child health in our region. Outlined below are the Kenya Ministry of Health national guidelines on vitamin A for children.



3-4-8

Vitamin A: National guidelines for children

Preventive schedule

Infants 9 to 12 months: 100,000 international units (IU) once when vaccinated for measles or at any other contact

Children 1 to 5 years: 200,000 IU every 3 to 6 months



3-4-9

3-4-10

Diseases and conditions targeted for treatment with vitamin A

Measles

Acute persistent diarrhoea

Malaria

Heavy worm infestation

Chicken pox

Tuberculosis

Anaemia

All children admitted into hospital

Severe protein energy malnutrition

HIV/AIDS

Schistosomiasis



3-4-11

Therapeutic schedule

Children < 1 year or < 8 kg: 100,000 IU at first contact

Children 1 to 5 years: 200,000 IU at first contact

Recommended practice

We have now discussed the nutritional requirements of the child. In this section we will discuss how practically to ensure that the child is receiving good nutrition.

State: In this section we shall deal with two age groups:

- ⇒ the first 6 months
- ⇒ 6 months to 24 months



3-4-12

3-4-13

The first 6 months

The first 6 months is the period of exclusive milk feeding. Milk, whether human or not, meets all the requirements of a baby during this period provided the baby gets adequate amounts.

Are there any exceptions?

- Unmodified cow's milk or other animal milk may lack vitamins and iron.
- Mothers with severe malnutrition often have inadequate quantities of milk. The milk may also be deficient in essential micronutrients. These deficiencies are most pronounced during periods of food shortage.

How much milk does an infant need to meet these needs?

The usual estimate is 150 to 200 ml/kg of body weight per day.



Work out from basic principles the content of different components.

Work in pairs or groups.

Displacing breast milk with additional foods during this period puts the baby at a nutritional disadvantage. Adding complementary food before 6 months of age replaces breast milk or other kinds of milk with nutritionally inadequate food.

Recommended practices

- Frequent on-demand breastfeeding. Breast milk is easily digested and therefore a breastfed baby will need to be fed 8 to 12 times in 24 hours.
- Adequacy of feeds is partly judged by:
 - ⇒ baby's satisfaction
 - ⇒ number of times a child passes urine in a 24-hour period
 - ⇒ weight gain



3-4-14

Introduction of complementary feeds

Make this statement:

We shall spend some time on understanding the optimal time for introducing complementary food.



- Ask participants to form pairs to discuss and give their views on the best time to introduce complementary food. They should give reasons to support their suggestions.



3-4-15

3-4-16

Biological basis for introducing complementary foods

Discuss the biological basis for introducing complementary food.

The time at which complementary feeds are introduced is determined by

- ⇒ development of a baby's ability to chew and swallow
- ⇒ the gastrointestinal tract's ability to digest complex carbohydrates
- ⇒ maturation of the infant's kidneys and hence the ability to excrete waste from more complex foods
- ⇒ the baby's nutritional requirements outstripping the nutrient supply in breast milk

Biological basis for the introduction of complementary feeds—nutritional needs

After the age of 6 months breast milk does not supply all the nutrients that the baby requires. There has been considerable discussion over whether to start complementary feeds at 4 months or at 6 months.



Discuss the pros and cons of whether to start complementary feeding at 4 months or at 6 months.



3-4-17

South American study on complementary feeding

A study was carried out among breastfeeding mothers and babies. Babies were randomly allocated to two groups:

Group 1. Continued exclusive breastfeeding for 6 months.

Group 2. Supplied with ready-made nutritious complementary food from 4 months but encouraged to continue breastfeeding.

The growth of the babies was then assessed and no difference was found between the two groups.

The conclusion from this study was that babies of healthy mothers do not need complementary feeds before the age of 6 months. The current recommendation for start of complementary feeding is at about 6 months.



Discuss the risks of early introduction of complementary foods:



3-4-18

Risks of early introduction of weaning food

There are several disadvantages of introducing complementary feeds too early:

- Baby refuses food, and feeding time becomes fighting time.
- Baby is physiologically stressed because the gut is not yet ready to digest the food.
- Breast milk is replaced by poor food, leading to malnutrition:
 - ⇒ too much food—obesity
 - ⇒ too little food—undernutrition and other deficiencies

The period 6 to 24 months

At 6 to 24 months, babies may be categorized as

- ⇒ breastfed
- ⇒ non-breastfed

For the **breastfed child**

State that

- ⇒ Breast milk continues to be important in this period (see page 75)
- ⇒ The needs from complementary food are recommended needs minus quantity of milk consumed.
- ⇒ Although there are variations, we shall assume the average breast-milk intake in the following calculations.



3-4-19

Volume of milk

At this stage go through volumes of milk:

- During the first year babies require approximately 750 ml per day.
- During the second year babies require approximately 500 ml per day.



3-4-20

Table 3.4.3

Nutrient requirements and number of complementary feeds during the period 6 to 24 months

Age in months	Calorie intake (kcal/day)	Number of complementary feeds per day
6-8	280	2-3
9-11	450	3-4
12-24	750	4-5

- Continue frequent on-demand breastfeeding, including night feeding for infants.
- Introduce complementary foods beginning around 6 months of age.
- Increase food quantity as the child gets older, while maintaining frequent breastfeeding. From complementary foods, provide
 - ⇒ infants 6 to 8 months old with approximately 280 kcal per day
 - ⇒ infants 9 to 11 months old with approximately 450 kcal per day
 - ⇒ children 12 to 24 months old with approximately 750 kcal per day

Local research is needed to determine the best combinations of foods and practices to achieve these levels of energy intake.

- Increase feeding frequency as the child gets older, using a combination of meals and snacks. Feed complementary foods to infants

- ⇒ 6 to 8 months old 2 to 3 times per day
- ⇒ 9 to 11 months old 3 to 4 times per day
- ⇒ 12 to 24 months old 4 to 5 times per day



- ☹ Discuss with the participants whether this feeding regime is possible among the clients they deal with. What would be the best modification of the above recommendations?

- Gradually increase food variety and density of consistency as the infant gets older, adapting the diet to the infant's requirements and abilities.



3-4-22

3-4-23

- ⇒ Feed mashed and semi-solid foods, softened with breast milk, if possible, beginning around 6 months of age.
- ⇒ Feed energy-rich combinations of soft foods to babies 6 to 11 months old.
- ⇒ Introduce 'finger foods' (snacks that children can eat by themselves) beginning around 8 months of age.
- ⇒ Make the transition to the family diet at about 12 months of age.

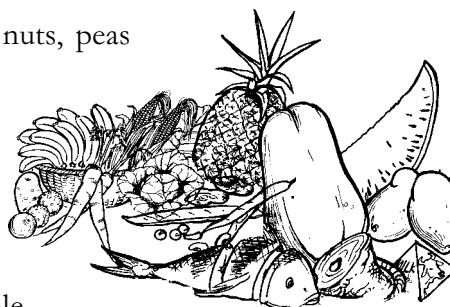
- Diversify the diet to improve quality and micronutrient intake.



3-4-24

3-4-25

- ⇒ Feed daily fruits and vegetables rich in vitamin A and iron-rich vegetables.
- ⇒ Feed daily vegetable proteins—beans, nuts, peas and other legumes. Feed animal protein (meat, poultry, fish) as often as possible. Protein needs are 0.7 g per 100 kcal.
- ⇒ Give vitamin and iron supplements when animal products are not available.





3-4-26

3-4-27

- Practise active feeding.
 - ⇒ Feed infants directly and assist older children when they feed themselves.
 - ⇒ Offer children their favourite foods and encourage them to eat when they lose interest in food or have depressed appetites.
 - ⇒ If children refuse many foods, experiment with different food combinations, tastes, textures and methods of encouragement.
 - ⇒ Talk to children during feeding.
 - ⇒ Feed slowly and patiently and minimize distractions during meals.
 - ⇒ Do not force children to eat.



3-4-28

- Practise frequent and active feeding during and after illness.
 - ⇒ During illness, increase fluid intake by more frequent breastfeeding and patiently encourage children to eat favourite foods.
 - ⇒ After a child has been ill, breastfeed and give food or other milk more often than usual and encourage child to eat more food at each sitting.



3-4-29

- Practise good hygiene and proper food handling.
 - ⇒ Caregiver needs to wash hands before preparing food and see that children's hands are washed before they eat.
 - ⇒ Serve foods immediately after preparation.
 - ⇒ Use clean utensils to prepare and serve food.
 - ⇒ Serve children using clean cups and bowls, and never use feeding bottles.



For the non-breastfed child

Stress the need for continued use of milk.

For infants on formula

Follow similar guidelines as for the breastfed infant.

For the one on unmodified cow's milk

Follow similar guidelines as for the breastfed infant.

Stress continued need of vitamin and iron supplements.

Note: Milk preparation is discussed in unit 3, 'Infant feeding choices', of this module.



Have the participants break into four groups and discuss.

Format for discussion

Group	Task
Group 1	Draw up a timetable for complementary feeding, giving reasons at every stage.
Group 2	<ul style="list-style-type: none"> • List the locally available foods. • Show their nutritional value. • Outline food preparation techniques and how they can be modified to increase bioavailability. • Design some nutritious diets.
Group 3	Draw up a simple analysis of the cost implications of appropriate diets in relation to what is available locally.
Group 4	Draw up practical guidelines on how to introduce complementary foods, giving reasons for what is suggested. Consider the following: <ul style="list-style-type: none"> ⇒ food first or breast first? ⇒ order in which to introduce foods ⇒ handling the child who refuses food
Plenary	Each group will present to the whole group, which will discuss to reach consensus.



Estimated duration: 2 hours including practical guidelines for group work.

Costs of complementary foods

Before recommending what foods to use, a health worker needs to be able to judge if the client will be able to afford them.



Discuss the following points.

- ⇒ judging the purchasing power of the client
- ⇒ how to make the best of limited resources
- ⇒ local food costs
- ⇒ home-prepared foods
- ⇒ commercial foods



Time estimated: 5 hours

Objectives

By the end of this unit, the learner should demonstrate knowledge and skills in counseling on complementary feeding.

- ◆ state the nutrient needs at different stages
- ◆ give appropriate advice on frequency of feeding
- ◆ advise on appropriate preparation

3-4-1

Definitions (1)

- ◆ infant and child feeding
- ◆ exclusive breastfeeding
- ◆ almost exclusive breastfeeding
- ◆ partial breastfeeding

3-4-2

Definitions (2)

- ◆ complementary feeding
- ◆ complementary food
- ◆ transitional foods
- ◆ family foods
- ◆ weaning

3-4-3

Nutritional needs of children

These are categorized by age group:

- ◆ birth to 12 months
- ◆ 12–24 months

3-4-4

Nutritional needs in the first year of life per kg per 24 hours

- ◆ water 150–200 ml
- ◆ energy 120–130 kcal
- ◆ protein 2–3 g

3-4-5

Nutritional requirements in the 2nd year of life

- ◆ water 100 ml/kg per day
- ◆ energy 85 kcal/kg per day
- ◆ protein 8–9 g per day

3-4-6

Mineral requirements in the first year of life mmol(mg)/kg per 24 hours

	0–0.5 years	0.5–1 years
◆ Sodium	115–350	250–750
◆ Potassium	350–925	425–1500
◆ Chloride	275–700	400–1200
◆ Calcium	400	600
◆ Phosphorus	300	500
◆ Zinc	5	5
◆ Iron	6	10

3-4-7

Vitamin A: National guidelines for children

Preventive schedule

- infants (9-12 months)—100,000 IU once during measles vaccination or other contact
- children (1–5 years)—200,000 IU every 3–6 months at any contact

3-4-8

Targeted diseases for treatment with vitamin A (1)

- ◆ measles
- ◆ malaria
- ◆ chicken pox
- ◆ anaemia
- ◆ severe protein energy malnutrition (PEM)
- ◆ schistosomiasis

3-4-9

Targeted diseases for treatment with vitamin A(2)

- ◆ acute and persistent diarrhoea
- ◆ heavy worm infestation
- ◆ tuberculosis
- ◆ all children admitted to wards
- ◆ HIV/AIDS

3-4-10

Therapeutic use of vitamin A (treatment of disease)

- ◆ Children < 1 year or weight < 8 kg
 - 100,000 IU at time of first contact
- ◆ Children 1–5 years
 - 200,000 IU at time of first contact

3-4-11

Infant feeding in the first 6 months of life (1)

- ◆ exclusive breastfeeding
or
- ◆ exclusive milk feeding

3-4-12

Infant feeding in the first 6 months of life (2)

- ◆ frequent on-demand feeding
- ◆ supplemental vitamins and iron for
 - all on unmodified animal milk
 - preterm and low-birth-weight infants
- ◆ no water or other foods

3-4-13

Introduction of complementary foods

- ◆ What is the best time to introduce complementary food?
- ◆ What are your reasons?

3-4-14

Biological basis for introducing complementary feeds (1)

Baby's readiness to take food

- ◆ oro motor function (ability to chew and swallow)
- ◆ gastrointestinal tract function
- ◆ renal maturation

3-4-15

Biological basis for introducing complementary feeds (2)

Nutritional needs derived from complementary food

- ◆ Energy
- ◆ Micronutrients—iron, vitamins A and D

3-4-16

Southern American study on complementary feeding (1)

- ◆ Group 1—continued exclusive breastfeeding until 6 months
- ◆ Group 2—exclusive breastfeeding to 4 months and complementary feeds added thereafter

No difference in the growth of the two groups of infants.

3-4-17

Risks of early introduction of complementary foods

- ◆ Baby refuses
- ◆ Physiological stress
- ◆ Malnutrition

3-4-18

Volume of milk

- ◆ First year approx. 750 ml/day
- ◆ 2nd year approx. 500 ml/day

What is derived from breast milk in 2nd year?

3-4-19

Recommended number of complementary feedings (CF) during the period 6–24 months

Age in months	Calorie (kcal/day)	CF per day
6 –8	280	2–3
9 –11	450	3–4
12–24	750	4–5

3-4-20

Recommended practice

- ◆ Continue frequent, on-demand breast-feeding, including night feeding for infants.
- ◆ Introduce complementary foods beginning around 6 months of age.
- ◆ Increase quantity of complementary foods as the child gets older while maintaining frequent breastfeeding
- ◆ Local research is needed to determine the best combinations of foods and practice to achieve these levels of energy intake.

3-4-21

Recommended practice

Gradually increase food variety and density of consistency as the infant gets older, adapting the diet to the infant's requirements and abilities.

- ◆ Feed mashed and semi-solid foods, softened with breast milk, if possible, beginning around 6 months of age.

3-4-22

Recommended practice

- ◆ Feed energy-rich combinations of soft foods to infants 6–11 months old.
- ◆ Introduce finger foods (snacks that children can eat by themselves) beginning around 8 months of age.
- ◆ Make the transition to the family diet at about 12 months of age.

3-4-23

Recommended practice

Diversify the diet to improve quality and micronutrient intake

- ◆ Feed vitamin A-rich fruits and vegetables daily as well as iron-rich vegetables.

3-4-24

Recommended practice

- ◆ Feed vegetable proteins—beans, nuts, peas and other legumes—daily. Feed animal protein (meat, poultry or fish) as often as possible. Protein needs are 0.7 g per 100 kcal.
- ◆ Give vitamin and iron supplements when animal products are not available.

3-4-25

Recommended practice

Practise active feeding

- ◆ Feed infants directly and assist older children when they feed themselves.
- ◆ Offer favourite foods and encourage children to eat when they lose interest or have depressed appetites.

3-4-26

Recommended practice

Practise active feeding

- ◆ If children refuse many foods, experiment with different food combinations, tastes, textures and methods of encouragement.
- ◆ Feed slowly and patiently and minimize distractions during meals.
- ◆ Do not force children to eat.

3-4-27

Recommended practice

Practise frequent and active feeding during and after illness

- ◆ During a child's illness, increase fluid intake by more frequent breastfeeding and patiently encourage child to eat favourable foods.
- ◆ After a child's illness, breastfeed or give other milk and food more often than usual and encourage child to eat more food at each sitting.

3-4-28

Recommended practice

Practise good hygiene and proper food handling

- ◆ Caregivers need to wash hands before preparing food and wash children's hands before they eat.
- ◆ Serve foods immediately after preparation.
- ◆ Use clean utensils to prepare and serve food.
- ◆ Serve children using clean cups and bowls, and never use feeding bottles.

3-4-29

Unit 5

Growth monitoring

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Growth monitoring

Introduction

Growth is a complex but regular process. It starts at conception and continues through infancy and childhood to adolescence. It is directly or indirectly related to diet, health of the mother and child, genetics and the environment. Most growth-monitoring programmes focus on foetal growth and child growth in the first 5 years of life. This is the period of most rapid growth and development and therefore the period that is most vulnerable to inadequate food intake as well to other environmental influences. Weight is the most commonly measured growth parameter.



3-5-1

Objectives

By the end of this session the participant should be able to

- ⇒ describe normal growth in children and factors affecting it
- ⇒ understand principles and concepts of growth monitoring and promotion, and counsel the mother appropriately

Definitions

Ask participants to define the terms growth, monitoring and promotion.



3-5-2

3-5-3

3-5-4

TERM	DEFINITION
Growth	<ul style="list-style-type: none"> • Increase in size • Change in shape • Change in tissue composition and distribution
Monitoring	Maintenance of regular surveillance. In terms of growth it means taking regular anthropometric measurements
Promotion	Motivation and stimulation of people to accept a new health practice by creating a sense of need and convincing them of the benefits of the new behaviour



3-5-5

What are the principles of growth monitoring and promotion?

- The growth of a child is influenced by the nutritional intake, health status, environment and care the child is receiving. Problems in any of these areas will result in growth faltering.



3-5-6

- The mother has a very important role in the growth of her child.

⇒ Mothers provide care and support.

⇒ Mothers decide how to feed the child.

⇒ Mothers provide for physical and physiological interaction.



3-5-7

- Growth monitoring is an entry point in discussing health issues.

⇒ Visualization of growth failure gives a clue that all is not well.

⇒ It allows the health worker and the mother to work out strategies for maintaining a healthy child.

⇒ It requires effective communication between health workers and parents.



Now discuss factors affecting growth.

Factors affecting growth



3-5-8

A number of factors affect the growth of children; they include diet, mother's health, infections and a child's birth weight.

Diet

An adequate diet is essential for growth. Details are already covered in previous units of this module.

Spend time on:

Growth of breastfed infant

Current growth curves of the US National Center for Health Statistics (NCHS) and the World Health Organization (WHO) are based on children who were predominantly formula fed.

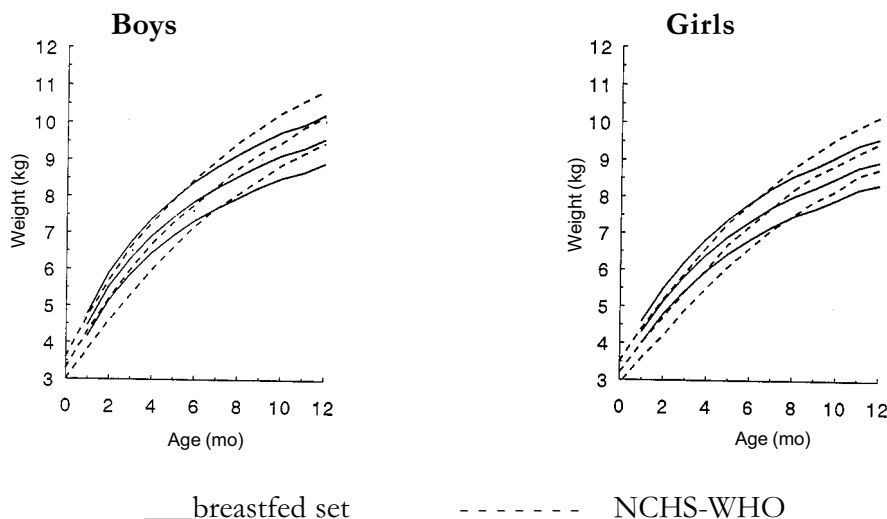
Recent studies of breastfed infants reveal the following:



3-5-9

Weight for age

Growth of the breastfed child — weight (the 3 lines in each set represent range)



In the first 2 months of life breastfed infants have faster weight increase than formula-fed infants. Thereafter the rate of weight gain is slower up to 9 months and then proceeds at a similar rate.

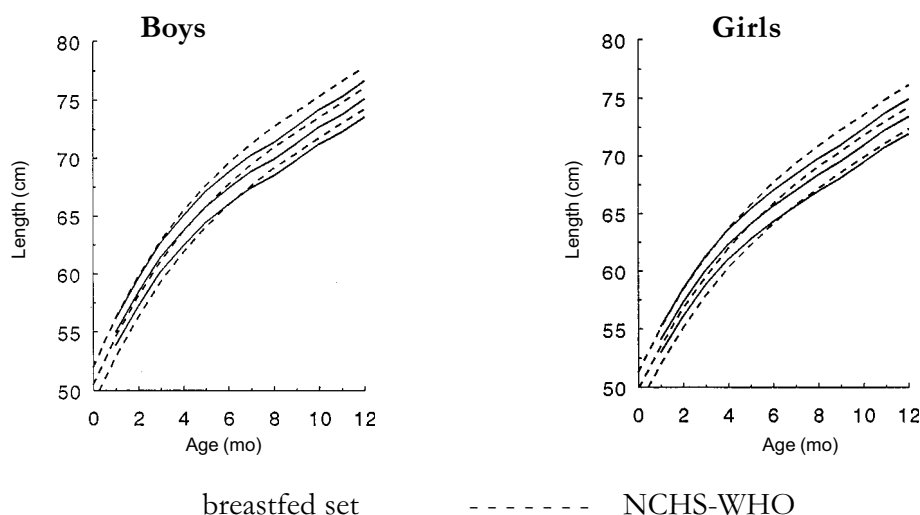


3-5-10

Length (height) for age

Similar observations as weight have been recorded on the growth in length but the magnitude of decline is less marked

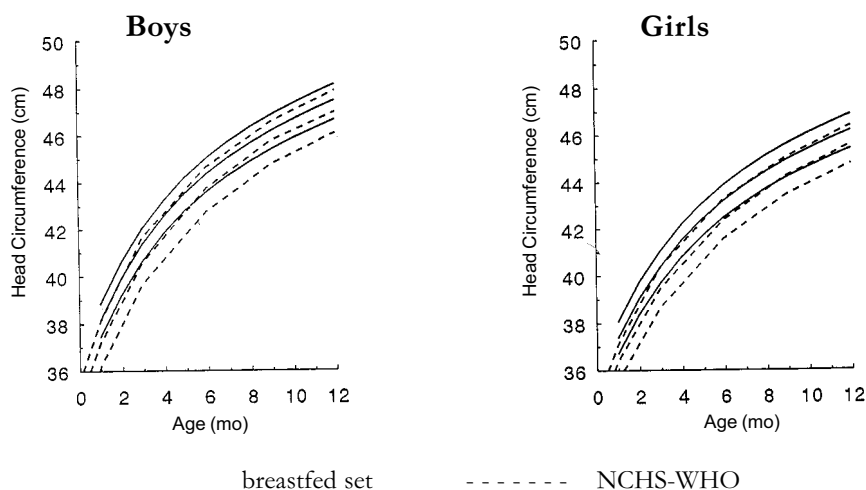
Growth of the breastfed child — length (the 3 lines in each set represent range)





Head circumference

3-5-11 **Growth of the breastfed child — head circumference** (the 3 lines in each set represent range)



Breastfed infants generally have larger heads than the WHO standards.

Think back:

- The African child's growth was always stated to falter from the age of 3 months.
- The teaching then was to introduce complementary foods at this age.
- The end result was greater malnourishment in the second half of the first year.

What should health workers now be telling mothers?

- The African child was obeying nature.
- We derailed the mothers
- Now mothers have to relearn about exclusive breastfeeding.



3-5-12

What is the effect of complementary food on the 4–6 month period?

See unit 4, 'Complementary feeding'.



3-5-13

Mother's health

The health of a mother has a significant effect on the growth of her baby. An ill mother maybe unable to look after her baby. Several studies have shown that when mothers die, the chance of the baby also dying increases 3- to 4-fold because they receive inadequate care. Babies also need psychosocial stimulation. A well-fed but unstimulated child fails to grow.



Acute and chronic infections

3-5-14

- Acute infection mostly affects weight.
- Chronic infection affects all parameters of growth.

During infections the body increases its use of energy as it tries to fight off the infection. At the same time there may be poor absorption of nutrients secondary to the infection or anorexia related to the same. Most children on an adequate diet demonstrate a period of rapid (catch-up) growth after a period of illness as the body compensates for the time lost during illness. If the illness has been ongoing for a long time or the diet is inadequate, there is then inadequate catch-up growth and the child ends up being stunted.



Birth weight and gestation

3-5-15

Preterm low birth weight ideally should be plotted as corrected age, that is chronological age minus gestation age, till age 18 months. Up to that age the child is always smaller but growth velocity is higher.



Indicators of adequate growth

3-5-16

- Weight for age is a measure of weight according to age. This is useful for detecting the sum total of nutritional experiences the child has had.
- Weight for height is a measure of weight according to the height. This is a useful measure of acute malnutrition. It is frequently used for rapid assessment of a population's nutritional status during periods of acute food shortage such as during famine.
- Height for age is a measure of height according to age. This is useful for detecting chronic malnutrition and helps identify stunted children.
- Head circumference. This is useful during first 2 years and is a measure of brain growth.
- Mid-upper-arm circumference (MUAC). MUAC increases during first year and remains stable up to 5 years. MUAC is a useful additional indicator of adequacy of nutrition. It is not dependent on age as are measures of height and weight. This method of assessing nutrition can be utilized only in surveys.



3-5-17



Ask participants to define:

Definition of the indicators

Underweight*	Weight is below average minus 2 standard deviations (< 3rd percentile) of the expected weight for age.
Stunting	Height is below minus 2 standard deviations (< 3rd percentile) of the expected height for age.
Wasting	Child is too thin — weight is below minus 2 standard deviations (< 3rd percentile) of the expected weight for height.
Failure to thrive	Failure to gain weight for more than 56 days.

* the lower line in the Kenyan child growth-monitoring card is the 3rd percentile weight for age for girls.



3-5-18



Discuss the role of the mother in growth monitoring and promotion

- Visualize growth together with health worker.
- Recognize child's needs.
- Decide what child will eat, how much and how often.
- Breastfeed or prepare nutritious foods or do both.
- Decide what to do about other issues that may affect child's growth.



3-5-19



What are the roles of the health worker?

- Weigh child with mother and plot.
- Interpret weight changes.
- Get to know mother's constraints.
- Learn from mother.
- Counsel mother.
- Explore cause of growth failure and manage or refer appropriately.



3-5-20



Discuss with participants.

Duration and frequency of growth monitoring and promotion

The Ministry of Health recommends that growth monitoring of children be regular until they reach the age of 5 years. Growth should be monitored monthly in the first year of life and every 3 months from the 2nd year.

Unfortunately most mothers stop bringing their children for growth monitoring as soon as the baby reaches the age of 9 months, when they receive their measles immunization.

Motivating mothers for continued growth monitoring after the first year



Participants to give suggestions.

Some of the responses should include

- ⇒ providing health education on the importance of growth monitoring
- ⇒ reducing the waiting time in the clinic
- ⇒ encouraging staff to communicate in a friendly manner with the clients
- ⇒ using the clinic visits as an opportunity to discuss the developmental needs of the child in the 2nd year of life and beyond

How to reduce burden on health worker

The MCH is usually a very busy place that provides for both curative and preventive health services. If health workers are overwhelmed with work, they become less effective. Services such as growth monitoring can be offered at other venues within the community. The health worker can work in partnership with other individuals providing services to young children like preschool teachers and social workers to establish community-based growth monitoring sites that refer only those children who are not growing well to the clinic.



List causes of growth failure and discuss management. Recap the factors given earlier.

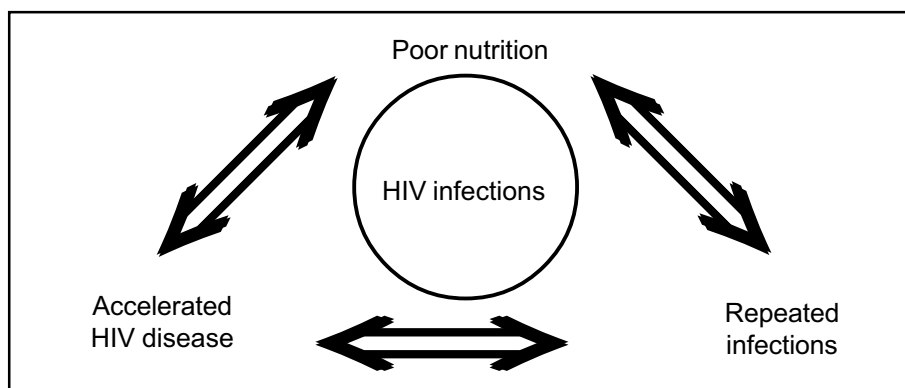
Growth faltering in HIV-1-infected children

☹ Growth failure is one of the key presentations of HIV-1 infection. Before the era of HIV, the link between malnutrition and immunosuppression was quite well recognized.



3-5-21

The vicious cycle of HIV and malnutrition



At least 90% of HIV-1-infected children experience wasting and nutritional depletion during the course of their illness. There is emerging evidence that the nutritional status has direct correlation with the survival of the HIV-1-infected individual.



3-5-22

What is the cause of growth faltering in HIV infection?

Four factors have been implicated in the growth failure associated with HIV infection in children:

- ⇒ poor energy intake
- ⇒ malabsorption of nutrients from the gut
- ⇒ abnormal increase in energy utilization
- ⇒ psychological and social stress

Poor energy intake

If a child is unable to eat enough, he or she will not receive the required nutrients. In HIV-1-infected children, several conditions may make it difficult for the child to eat enough. These include

- Oral lesions: infections with candida, herpes simplex or cytomegalovirus infection. These infections make the mouth very sore so that it is painful for the child to chew and swallow food.
- Gastric irritation, nausea, or vomiting caused by, HIV and its co-morbidities or the medication the child is taking may lead to reduced nutritional intake.
- HIV-1-infected children suffering from encephalopathy may reduce their nutrient intake.
- Primary anorexia may lead to reduced nutrient intake.

Gastrointestinal tract absorption

Absorption of nutrients in the gastrointestinal tract is impaired in HIV-infected children because of primary HIV infection of the gut epithelium as well as infection with other pathogens that cause malabsorption such as bacteria, protozoa, fungi and viral agents. These infections commonly manifest with diarrhoea.

Energy utilization

During infections, HIV included, the basal metabolic rate increases. Therefore higher caloric intake is needed to sustain growth. This increase in basal metabolic rate is sustained whether an individual is receiving enough nutrients or not, and this leads to a breakdown of body tissues and subsequent wasting.

Social and psychosocial status

In nearly all instances, paediatric HIV is a family diagnosis and it exerts social, psychological and economic stress on the family.

- Ill mothers are not able to provide adequate care for the child, leading to poor nutrition and stimulation.
- Financial constraints from a variety of factors including loss of employment or increased health expenditure limit the family resources available to ensure a varied and nutritious diet for the child as well as other family members.
- Bereavement or psychological stress of HIV-1 disease limits the parents' ability to provide a stimulating and mentally nourishing environment for the child.
- Care needs for other ill members of the family impinge on the time required to care for the child.

Growth pattern of HIV-1-exposed children

- Growth faltering, one of the earliest signs of HIV disease, is often observed by the age of 3 months. HIV-1-infected children present a clinical picture of chronic malnutrition, which includes low weight for age and stunting. During periods of acute infections they may show features of wasting (low weight for height). Uninfected children grow normally as long as they receive adequate calories.

Case studies

- Use available cases from the growth monitoring and promotion programme.
- or
- Select a number of children from the child health clinic and let the participants weigh, plot and counsel.

Objectives

- ◆ Describe normal growth in children and factors affecting growth.
- ◆ Understand principles and concepts of growth monitoring and promotion and counsel the mother appropriately.

3-5-1

Definition of growth

- ◆ increase in size
- ◆ change in shape
- ◆ change in tissue composition and distribution

3-5-2

Definition of growth monitoring

Maintenance of regular surveillance. In terms of growth it means taking regular anthropometric measurements

3-5-3

Definition of growth promotion

Motivation and stimulation of people to accept a new health practice by creating a sense of need and convincing them of the benefits of the new behaviour

3-5-4

Principles of GM&P (1)

Deals with total child

- ◆ health
- ◆ environment
- ◆ feeding
- ◆ care and support

3-5-5

Principles of GM&P (2)

Relies on mother participation

- ◆ Mother as provider of care and support
- ◆ She decides how to feed the child
- ◆ She provides physical and psychosocial interaction

3-5-6

Principles of GM&P (3)

An entry point in discussing health issues

- ◆ Visualization of growth failure gives a clue that all is not well
- ◆ It allows health worker and mother to work out strategies in maintaining a healthy child
- ◆ It requires effective communication between health workers and parents

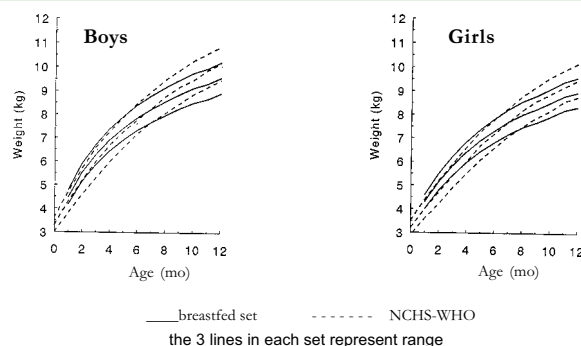
3-5-7

Factors affecting growth

- ◆ diet
- ◆ mother's health
- ◆ acute and chronic infections
- ◆ chronic disorders
- ◆ birth weight and gestation

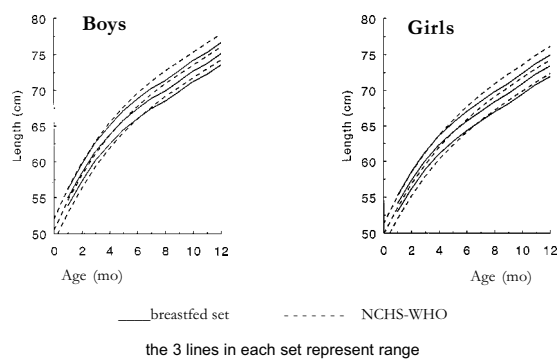
3-5-8

Growth of the breastfed child — weight



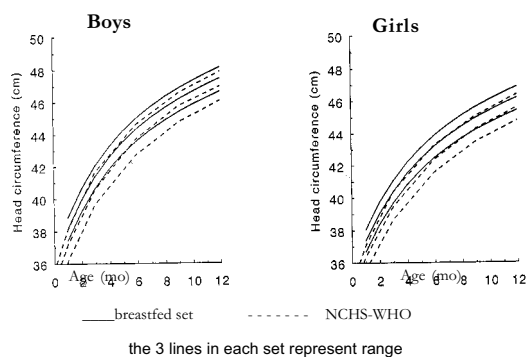
3-5-9

Growth of the breastfed child — length



3-5-10

Growth of the breastfed child — head circumference



3-5-11

Effect of diet on growth

- ◆ Effect of complementary food on the 4–6 month period?
- ◆ Reduces breast-milk intake and if
 - nutritious — no effect on growth
 - non-nutritious — reduces growth

3-5-12

How does mother's health affect child's growth?

- ◆ Psychosocial interaction
- ◆ An ill mother is not able to prepare foods, and so on

3-5-13

Role of illness

- ◆ Acute and chronic infections
- ◆ Chronic disorders

3-5-14

Role of birth weight and gestation

For preterm babies...
always remember to plot
chronological age **minus** gestation
age, till 18 months

3-5-15

Indicators of adequate growth

- ◆ weight for age
- ◆ height for age
- ◆ weight for height
- ◆ head circumference
- ◆ mid-upper-arm circumference

3-5-16

Description of indicators

Underweight	Weight for age below average to various degrees
Stunting	Height for age below average
Failure to thrive	Failure to gain weight for more than 56 days

3-5-17

Role of mothers in GM&P

- ◆ Visualize growth together with health worker
- ◆ Recognize a child's needs
- ◆ Decide what child will eat, how much and how often
- ◆ Breastfeed and/or prepare nutritious foods
- ◆ Decide what to do about other issues affecting child's growth

3-5-18

Role of health workers in GM&P

- ◆ Weigh child with mother and plot
- ◆ Interpret weight changes
- ◆ Get to know the mother's constraints
- ◆ Learn from the mother
- ◆ Counsel the mother
- ◆ Explore cause of growth failure and manage or refer appropriately

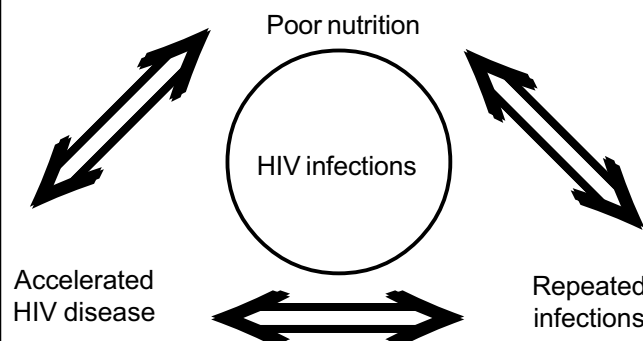
3-5-19

Duration and frequency of monitoring

- ◆ Ministry of Health recommendations
- ◆ What happens in practice?
- ◆ How do you motivate mother?
- ◆ How do you reduce burden on health workers?

3-5-20

The vicious cycle of HIV and malnutrition



3-5-21

Growth faltering in HIV infections

- ◆ poor energy intake
- ◆ malabsorption of nutrients from the gut
- ◆ abnormal increases in use of energy
- ◆ psychological and social stress

3-5-22

PMCT TRAINING CURRICULUM



Module 4

COUNSELING SKILLS FOR THE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

prepared by

Ms Cecilia Rachier

with


Dr Sam Kalibala

Mr Kukubo Barasa

Module 4

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Counseling skills for the prevention of mother-to-child transmission of HIV

Use the 'Counseling' set of transparencies to present the information for this session. Use the transparency at the point indicated in the text with a flag , title and number.

🎯 Objectives

Introduce the module by presenting the learning objectives below in a mini-lecture using the transparency.



4-1-1

General

By the end of the module, participants will have basic knowledge of counseling skills and knowledge needed for voluntary counseling and testing for prevention of mother-to-child transmission of HIV and will be able to supervise and support other staff.

Specific

The participants will be able to

- ⇒ explore and have an understanding of who they are, their values, sex attitudes, fears, prejudices, weaknesses and strengths
- ⇒ describe basic information on MTCT and HIV/AIDS
- ⇒ describe and demonstrate basic counseling skills
- ⇒ describe the guidelines for pre- and post-testing clients for HIV and ongoing support for clients after testing
- ⇒ describe challenges that clients face when coming for VCT for the prevention of MTCT of HIV
- ⇒ describe possible challenges that the counselor or counseling aide may face when working with clients coming for VCT for the prevention of MTCT of HIV
- ⇒ explain how to self-assess

Unit 1

Self-concept and self-perception of the counselor

prepared by

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Self-concept and self-perception of the counselor

Training of health workers for VCT

- ⬇ Counselors must be adequately trained to provide HIV counseling, given the sensitive and challenging nature of their work. The health workers selected for the VCT for MTCT interventions course should either undergo or have undergone a counseling course of at least certificate level.

Training methods

- Introduce subtopics through short lectures.
- Have participants do group work and brainstorm to link knowledge with their experiences.
- Role-play typical selected problems and interventions.
- Voluntarily share personal experiences.

Media to be used

- Prepared transparencies
- Flip charts
- Reading text

How session will be assessed

The facilitator and other colleagues will observe the participants during the class role-plays and give them feedback. The participants will also complete pre- and post-training written evaluations to show what they have learned.



4-1-2

Self-awareness

Introduce this subject by providing the information below in a mini-lecture.

The counselor as a person

Counseling differs from many occupations, in that its main tools are people. Counselors and clients bring many characteristics into a session and experience many thoughts and feelings during it. Counselors are first of all people and secondly they are counselors. They have their own weaknesses, strengths, fears, anxieties, doubts and certainties. All these can either hinder or facilitate their work with clients. Counselors must therefore continuously engage themselves in self-exploration to be aware of themselves, how others affect them, and the effect they have on others. The self-concept is one way that counselors may attempt to understand themselves.

Ask the participants to apply the self-concept quiz below on themselves individually.



Self-concept quiz

This is not a test. There are no right or wrong answers. You will not have to show what you've marked to anyone if you don't want to. Tick in the left box the statements below that describe you most of the time. For each statement that describes you, tick the box that represents how you feel about being like that.

	I like being like this	I am indifferent	I dislike being like this
<input type="checkbox"/> I am happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am a mess	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am successful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am a slow learner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am clumsy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am respectable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am a good parent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am attractive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am a good lover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I am a bore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		I like being like this	I am indifferent	I dislike being like this
<input type="checkbox"/>	I am a loser			
<input type="checkbox"/>	I am conscientious			
<input type="checkbox"/>	I am a cheat			
<input type="checkbox"/>	I am an introvert			
<input type="checkbox"/>	I am a daydreamer			
<input type="checkbox"/>	I am an optimist			
<input type="checkbox"/>	I am reliable			
<input type="checkbox"/>	I am a good friend			
<input type="checkbox"/>	I am moody			
<input type="checkbox"/>	I am sociable			
<input type="checkbox"/>	I am religious			
<input type="checkbox"/>	I am intelligent			
<input type="checkbox"/>	I am weak willed			
<input type="checkbox"/>	I am a loner			
<input type="checkbox"/>	I am kind			



After the participants have completed the quiz, ask anyone who wishes to share their responses to the quiz with the group to do so. Emphasize, however, that ‘you do not have to share if you are not comfortable doing so’. When a volunteer shares responses, discuss what each reflects in self-awareness, using the information below.

Some of the statements above may help you to understand what your self-concept is.

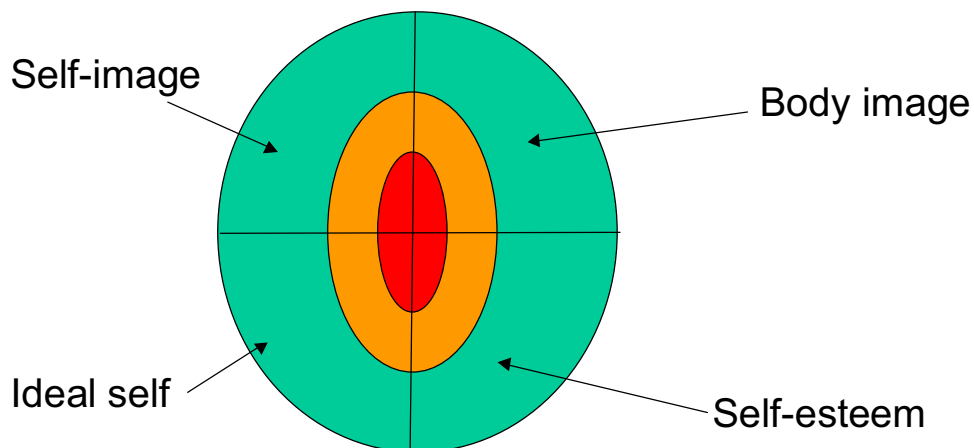
The self-concept can be considered as made up of two components: the statements that you ticked (in the left-hand box) are part of your self-picture or self-image. The right-hand box that you ticked determines your self-esteem, self-worth or degree of self-acceptance.

Many other statements could have been chosen. The list here is just a random sample.



Self-concept model

4-1-3



The graphic model and its explanation

The self-concept model is a map or illustration that can enable people to understand themselves better.

The model of self-concept is like a map or an illustration that can help people understand themselves better. It is divided into four equal and interrelated parts: self-image, ideal self, body image, and self-esteem.

The four parts of the self-concept have three intrinsic circles superimposed on them: the public, the private, and the hidden domains.

Public domain

All the information here is public or can easily be made public by the person. The person here has little control over personal information such as, sex, age, race, colour, tribe, residence, occupation.

Private domain

Information here is confidential. The person has control over what to tell others and discloses this information to only a chosen few. It includes secrets or intimate thoughts such as 'I am a loser, a failure, rich, in love with . . ., hate. . ., am poor'.

Hidden domain

Information here is not in the person's awareness. It is information from early childhood memories, which may be painful, embarrassing or humiliating to remember and so the person has learned to repress it deeply in the unconscious. Examples here are incest and sexual abuse in childhood. This person may need professional help from a known psychoanalyst.

Self-image

Self-image comprises the statements that describe who we are, for example, 'I am a counselor, a nurse, a mother, a wife, a grandmother, HIV positive. I am bright, foolish, clever, patient, jealous, a good cook, lazy, hardworking, impatient.'

Ideal self

Every person has someone they would like to be like or something they aspire to have, for example, 'I would like to be rich, married, a mother, a responsible father, an employer. I would like to complete college, build or buy a house, get a promotion, look nice. I would like to be rich, slimmer, fatter, attractive.'

Body image

. . . is what we think our body looks like. How we think our body looks is not always straightforward or acceptable to us. Some people are not happy with their body weight or size or shape despite being told that they are all right. They may not like the fact that they are too thin, fat, short, tall, dark or light complexioned, have straight or curly hair.

Self-esteem

After knowing ourselves it is important to find out what we like about who or what we are. This is our total worth or our pride, values, enjoyment or respect about ourselves.

If both our self-image and our body image correspond with our ideal self, then our self-esteem is reasonably high. If our public domain and private domain are not much different, meaning that we are open and have nothing much to hide from people, then our self-esteem is also high.

Psychosocial consequences of HIV among women

☺ This part of the module should be taught by a trainer who is familiar with the needs of women in relation to HIV/AIDS, preferably a counselor working with an AIDS service organization. As you present the following information, pause at each transparency to ask participants to share their experience as providers. Write each response on a flip chart and ask the other participants to comment as appropriate.



Vulnerability of women

4-1-4

The number of infected women worldwide is growing rapidly, and many more are dying of AIDS while young in comparison with men or with the numbers of children. Women are more vulnerable to AIDS because . . .

⇒ they lack access to means of prevention, health care and support

⇒ there is economic and social inequality between men and women

Also, for women, there are implications of mother-to-child transmission during pregnancy, birth and breastfeeding.



Women's concerns

4-1-5

Women's concerns regarding HIV infection

Women often discover their status by accident, after the spouse or partner or child is already symptomatic. The woman in this case has to deal with a double crisis—that of the spouse or child's illness as well as her own.

Women are often wrongly accused of having brought the infection into the family. Hence, women testing positive may have fears of being isolated or abandoned by family and friends. Many times these fears are real.

The woman's infection may be the first indication that she or her partner has had another partner, and disclosure of this within the family unit may be traumatic.

Fear of social stigma, abandonment by family, friends and community, and

extreme feelings of isolation and loneliness may compel a woman to keep her condition secret. Infected women may be extremely concerned about the welfare of their children and underestimate their own needs. Some may fear that their children will be taken away.

Infected women may have to make tough and often painful decisions about their personal lives. Such decisions include

- ⇒ who will take care of their children after their own death?
- ⇒ whether to invest in antiretroviral drugs
- ⇒ whether to avoid pregnancy
- ⇒ whether to breastfeed
- ⇒ contraception options

A woman may risk conflict with her spouse, abandonment or even violence—for example, if she asks her sexual partner to use condoms. Some infected women will risk getting pregnant or keeping a pregnancy because of the great importance her culture places upon childbearing.

The woman's family is bound to be affected, and some in her family may feel betrayed or resent the infected person's irresponsibility in jeopardizing the health and life of other family members. In some instances, the infected woman may leave or her natural family may abandon her. Issues of intimacy and trust may arise, and questions have to be addressed of whether sexual relations should continue and whether condoms will be used. In cultures where women are considered subordinate to their husbands, there are possibilities of further transmission if sexual relations are forced. Fear of social stigma may force the family into a conspiracy of silence, which may impose an emotional strain on the family. Family members may also for the first time discover that the woman is a commercial sex worker and feel embarrassed and resentful.

It is thus evident that the infected woman has many concerns and therefore needs a lot of support from family members, friends, professionals and the community in general. Since 'prevention is better than cure', it is important that the woman is helped to protect herself from getting HIV and therefore from infecting others or facing some of the painful consequences mentioned. One of those likely consequences is transmitting the virus to her unborn child.

Common emotional reactions in an infected woman



Brainstorm with the participants, amplifying the points that follow.

The infected women is likely to feel—

- ⇒ anger towards the person who may have infected her
- ⇒ grief at her loss of health and status, changed body image and sexuality, the possibility of having to give up having children and of dying and leaving her children alone
- ⇒ guilt relating to how she may have been the cause of illness in her own family, particularly in her children

Objectives

As a participant you will be able to . . .

- ◆ explore and understand your own values, attitudes, fears, prejudices
- ◆ describe information on MTCT and HIV/AIDS
- ◆ demonstrate counseling skills
- ◆ describe challenges faced by HIV clients and counselors
- ◆ explain how to self-assess

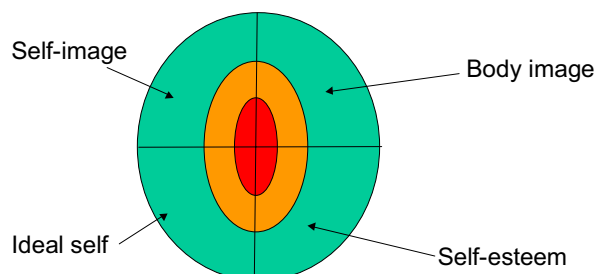
4-1-1

Self-awareness

- ◆ The main tool for counseling is people
- ◆ People have many characteristics, experiences, feelings, which can hinder or facilitate work
- ◆ People need to self-explore

4-1-2

Self-concept model



4-1-3

Vulnerability of women

Women often—

- ◆ lack access to services
- ◆ suffer from socio-economic inequality

Women must also bear the implications and responsibility of mother-to-child transmission

4-1-4

Women's concerns

- ◆ Double crisis of self plus child or husband
- ◆ Fear of isolation and rejection
- ◆ Worry about welfare of children
- ◆ Tough and painful decisions
 - invest in antiretroviral drugs?
 - avoid pregnancy?
 - avoid breastfeeding?
 - risk conflict with spouse?

4-1-5

Unit 2

Introduction to HIV/AIDS counseling

prepared by

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Introduction to HIV/AIDS counseling

Present the following information below and pause at each transparency to ask participants to share their experience as providers. Write the responses from each participant on a flip chart and ask other participants to comment as appropriate.

General counseling



4-2-1



General counseling

Counseling is a vital part of HIV/AIDS care and a fundamental part of good clinical management. There are many definitions of counseling. One is ‘a skilled system of helping individuals to explore personal issues, for them to make decisions and put plans into action’.

The British Association of Counseling defines counseling as ‘the skilled and principled use of relationships that develop self-knowledge, emotional acceptance and growth, and personal resources. The overall aim is to live more fully and satisfyingly. Counseling may be concerned with addressing and resolving specific problems, making decisions, coping with crises, working through feelings and inner conflict, or improving relationships with others. The counselor’s responsibility is to facilitate the client’s work in ways that respect the client’s values, personal resources, and capacity for self-determination.’

Counselors are trained in the theories of counseling and are perceived by both recipient and themselves as the recipient’s counselor.



4-2-2

Are you counseling or using counseling skills?

Counseling vs using counseling skills

Use the information below to outline the differences between ‘doing counseling’ and ‘using counseling skills’.

Counseling is often confused with using counseling skills. Doing counseling and using counseling skills are not one and the same thing. Counseling, however, involves using counseling skills.



Definition—One is said to be using counseling skills and not doing counseling when

- ⇒ counseling skills are being used in the course of their day-to-day work
- ⇒ counseling skills are being used to enhance the everyday role of nurse, doctor, social worker, teacher, priest, clerk and so on
- ⇒ counseling skills are used to enhance communication with someone but without taking the role of the counselor
- ⇒ the recipient perceives the person using the skills as acting within one's functional or professional role, not the role of a counselor

Counseling skills are distinguished from 'listening' or 'counseling' but contain elements of both activities. The distinction is if the intention of the user is to enhance the performance of the functional role of line-manager, nurse, doctor or another. Neither the client nor the helper in this case sees the helper as the client's counselor. The helper is not necessarily trained in counseling but probably in counseling skills.

Only when both recipient and helper explicitly contract to enter into a counseling relationship does the activity cease to be 'using counseling skills' and becomes 'counseling'.



4-2-3

Other helping skills

Other helping skills

Give a mini-lecture using the following information to discuss other forms of helping skills, different from counseling skills, that providers use in their work. Ask participants to share work experiences when they have used one or another of these skills.

There are various ways of helping. The following are practised along with counseling skills.

- ⇒ giving general advice
- ⇒ giving information
- ⇒ befriending or being a buddy
- ⇒ advocating for client

- ⇒ intervening temporarily in a crisis for those unable to act for themselves
- ⇒ educating

The following can be used independently as a part of a counseling relationship:

- ⇒ giving personal information to address client's needs
- ⇒ obtaining informed consent, helping solve problems, assisting in decision making

Difference between counseling and education



Ask the participants to brainstorm about the differences between counseling and education. Write the information on a flip chart using a table similar to the one below. Encourage all who make an input by writing down their contribution. At this stage, there are no right or wrong answers. When it appears there are no more contributions, use the table following to fill in information gaps.



4-2-4

Counseling is	Education or guidance is
<div> <div>Plans</div> <div>Choices</div> <div>Options</div> <div>Decisions</div> <div>Client</div> </div>	<div> <div>Directives</div> <div>Guidance</div> <div>Information</div> <div>Teaching</div> <div>Client</div> </div>

The heart of psychotherapy

Affective, value oriented, deals with perception, motivation, needs and feelings

More personal, intimate, less structured, interpersonal, private and confidential

Largely emotional, flexible, less didactic

Usually initiated by client

The body of psychotherapy

Knowledge based, deals with facts, principles, methods and cognition

Less personal, less intimate, usually structured and more public

Informative and didactic

Usually initiated by counselor



4-2-5

What is HIV/AIDS counseling?



HIV/AIDS counseling

HIV/AIDS counseling is applying the general principles of counseling to a specific situation to help someone to cope with the issues and concerns arising from actual HIV infection or the possibility of being infected or from caring for someone in either of these situations. The process includes evaluating the personal risk of HIV transmission and encouraging preventive behaviour.

Why is HIV counseling necessary?



Brainstorm with the participants and fill in information gaps using the following information.

HIV/AIDS is a life-threatening illness and the issues involved in HIV/AIDS infection may be painful, frightening, and threatening to patients and health care staff. Counseling is necessary.

- The infection with HIV is lifelong and has no cure.
- AIDS is almost always fatal. Patients, lovers and families have to cope with this reality and adjust to acute, chronic and terminal illness.
- HIV is infectious, and it is likely that the person infected with the virus will remain infected and infectious for life. Clients should be made aware of the importance of avoiding reinfection with HIV and new infections such as STDs as well as protecting others.
- Those most at risk are the young, and a diagnosis of HIV may mean a loss of independence physically, psychologically and socially. Issues of sex and sexuality, normally not easily or comfortably addressed, must be addressed.
- Fears arise from the uncertainty of unpredictable medical conditions and the reactions of the people close to them.
- Information is conflicting and knowledge incomplete about the prognosis, care and prevention of HIV.
- Infected persons and those closest to them are likely to have a broad range of physical, psychological and social needs and problems. Some of the issues requiring adjustment involve housing, finance, treatment and resuscitation.
- Good management can help contain these problems. Individuals, their families and even the community can get help on how to live and to cope

with their problems. When difficulties are identified early, plans can be made and appropriate referrals made ahead of crises. Some psychiatric problems may even be avoided.

- Coordination is needed. Since HIV/AIDS affects many parts of the body, it is likely that many medical specialists will be seeing the same client, and this is likely to confuse the client at times.
- Counseling provides the support needed to bring and sustain changes in risk behaviour.
- Since knowledge alone is not enough, counseling helps the client find new and perhaps different approaches to safer sex and responsible social relationships. Behavioural change can prevent a person from acquiring HIV infection or transmitting it to others.
- Counseling helps those infected to live with the infection. They are helped to deal actively with their problems to lead more fulfilling lives. They can keep control over their lives by learning to solve their problems and make their own decisions.



4-2-6

Who is an HIV counselor or counselor aide?

The HIV counselor or counseling aide



The counselor or counseling aide is anyone who intentionally takes the role of providing counseling about issues related to HIV infection, whether this role is temporary, alternating with other helping roles, or is full-time, to the exclusion of other forms of helping.

Who should counsel?

Counseling in HIV/AIDS infection can be either a full-time commitment or a part-time caring role of health care professionals in the hospital, community, or blood transfusion centre. These professionals include nurses, social workers, counselors, psychologists and therapists, religious workers, community-based workers, community members, friends and family members, members of AIDS organizations, and people with AIDS.

The person doing HIV/AIDS counseling must be fully trained in in-depth counseling or in counseling skills as well as in HIV/AIDS counseling.



Triangle of counseling providers

4-2-7



Discuss the definition of counseling using the transparency and the following information.

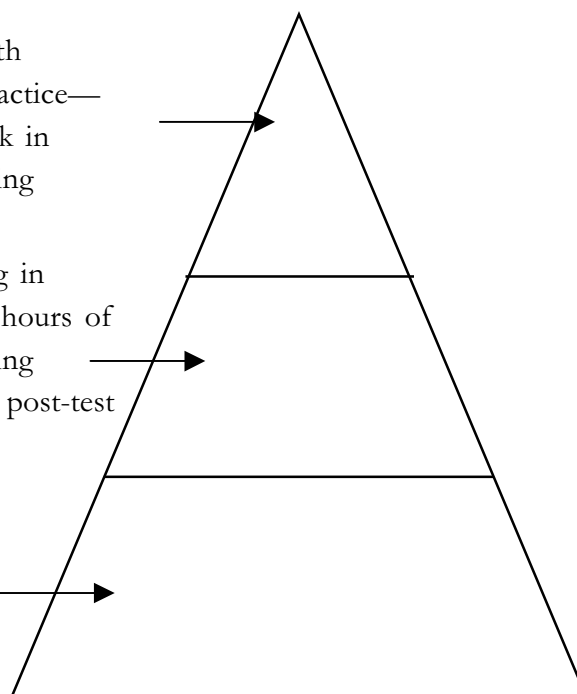
The person should have a genuine interest in working with and helping people with HIV/AIDS and most important of all should have the necessary qualities of a good helper. Specialist HIV/AIDS counselors should be appointed to deal with the complicated and time-consuming client issues in clinical settings.

Triangle of providers of HIV counseling

Providers who have received in-depth training in counseling theory and practice—450 hours of diploma or degree work in counseling plus HIV/AIDS counseling

Providers who have received training in counseling theory and practice—150 hours of training with a certificate in counseling course plus training in HIV pre- and post-test counseling

Providers who have received short training courses to help people concerned about HIV—20–30 hours of basic counseling skills and HIV awareness



Who is HIV/AIDS counseling for?



Brainstorm with the participants using the information below.

All sexually active people in all countries of the world who engage in unprotected sexual intercourse are to some extent at risk of contracting HIV infection. HIV/AIDS counseling is for individuals, couples, families and groups, referred to as 'clients'. Those who need counseling include

- ⇒ those who are physically unwell and want to know their HIV status
- ⇒ those who are apparently well but worried about HIV/AIDS
- ⇒ the family and close friends or colleagues of the patient
- ⇒ children with HIV and AIDS
- ⇒ those with HIV and their partners
- ⇒ those seeking help because of past or current risk behaviour
- ⇒ those experiencing difficulties with issues such as employment, housing and finances as a result of HIV infection
- ⇒ those at all stages of illness related to HIV/AIDS
- ⇒ those found to be HIV antibody positive in the routine screening of donated blood

When to counsel



Brainstorm with the participants and fill in information gaps using information below.

Counseling should begin whenever people express concerns or ask for information about HIV and also when a health care professional identifies a problem:

- ⇒ before an HIV test (pretest)
- ⇒ on receiving HIV results, regardless of whether the test is negative or positive (post-test)
- ⇒ during follow-up for those who are HIV antibody positive and asymptomatic
- ⇒ during follow-up for those who are HIV antibody positive and becoming unwell
- ⇒ during clinical care for those with AIDS-related conditions
- ⇒ when treatment and investigations are being considered
- ⇒ at times of crisis for the patient or their close contacts
- ⇒ at the stage of terminal illness when the patient, close contacts and family may have special counseling needs
- ⇒ after a death, when relatives, close contacts and others may benefit from bereavement counseling

Where to counsel



Brainstorm with the participants, then fill in information gaps using information below.

The location of the counseling room is important and can influence what happens in the session. Often, clients find it easier to confront and discuss the emotionally charged issues of love, sex, HIV/AIDS and death in privacy, away from possible interruptions and preferably in a pleasant atmosphere. The room could be in the hospital, a health centre, a special clinic, a school, a church, or the patient's home.

General counseling

Counseling is a skilled system of helping individuals to explore personal issues, for them to—

- ◆ make decisions
- ◆ cope with crises
- ◆ work through feelings
- ◆ work through inner conflicts
- ◆ improve relationships with others

4-2-1

Are you counseling or using counseling skills?

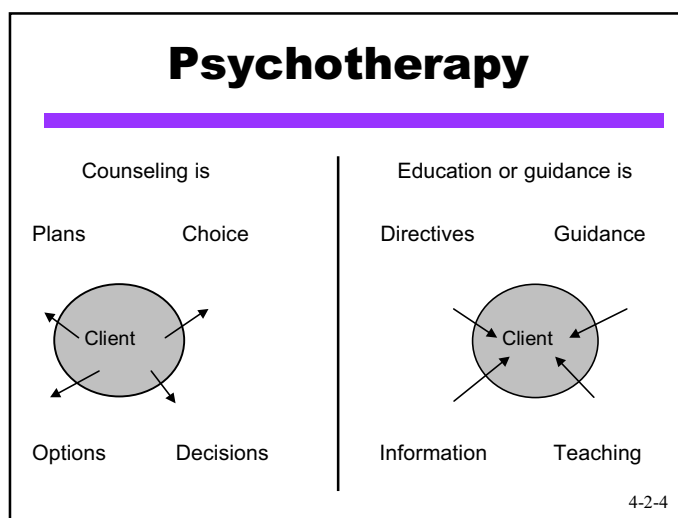
- ◆ Counseling uses counseling skills.
- ◆ We use counseling skills in the course of our day-to-day work.
- ◆ Counseling skills help to enhance our roles as health workers, teachers, priests, managers, parents.
- ◆ Using counseling skills becomes counseling only when both recipient and helper enter into a contract.

4-2-2

Other helping skills

- ◆ giving general advice
- ◆ giving information
- ◆ befriending, being a buddy
- ◆ advocating for client
- ◆ intervening temporarily in a crisis
- ◆ educating

4-2-3



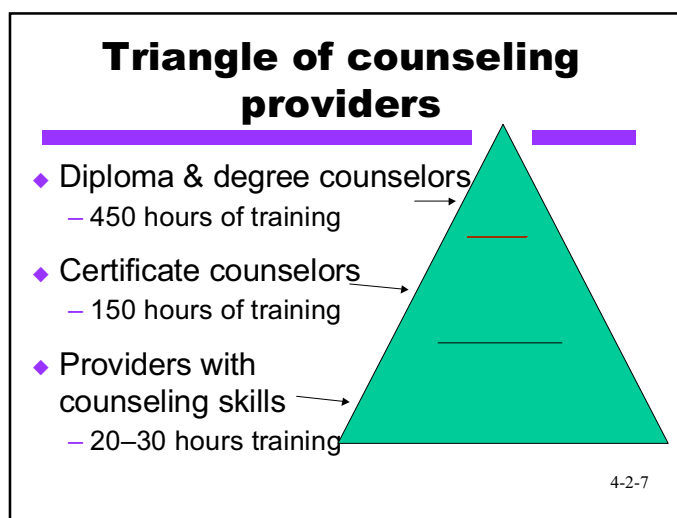
What is HIV/AIDS counseling?

- ◆ applies general principles to HIV situation
- ◆ helps cope with HIV infection
- ◆ copes with possibility of infection
- ◆ copes with person's need for care
- ◆ evaluates personal risk
- ◆ facilitates preventive behaviour

Who is an HIV counselor or counselor aide?

Can be anyone who intentionally takes on the role of HIV counseling—

- ◆ Temporary
- ◆ Alternating with other duties
- ◆ Full time
- ◆ Trained in counseling or counseling skills
- ◆ Genuine interest
- ◆ Specialists for complicated cases



Unit 3

The process and practice of counseling

3

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The process and the practice of counseling



Map of counseling territory

4-3-1

Counseling is a relationship that is safe, client-centred and dynamic. Within it, a range of skills and techniques are used to initiate a process of positive change, from-

- ⇒ dissatisfaction to satisfaction
- ⇒ pain to comfort
- ⇒ low esteem to high esteem
- ⇒ poor social skills to good social skills

Process of counseling

Counseling can be seen as a process that takes place within a relationship. In analysing this process, it is often split into three stages. Gerard Egan's *The Skilled Helper* is a widely recognized source of information on these three-stage models.¹



Exploration stage

4-3-2

Stage 1—Exploration: the beginning stage

This is the stage in which the counselor helps the client clarify their current state of affairs in terms of difficulties, problems, issues, concerns, and undeveloped opportunities. The aim here is to establish a relationship with the client so that they feel safe enough to explore the issues that they face by identifying and clarifying problem situations, unused opportunities and the key issues calling for change. The client is helped to tell their own story, to break through blind spots that prevent them seeing themselves, their problem situations and unused opportunities as they really are and that prevent them from successfully carrying out the work of the helping process. The client is then helped to choose the right problems or opportunities to work with. The counselor uses the skills of active listening, reflecting, empathy, genuineness and

¹ 6th edition (Pacific Grove, California: Brooks Cole, 1996).

respect. It is essential to concentrate on the client's agenda, not to impose one's own agenda or try to satisfy one's own curiosity. Stay with the client. The counselor should also help the client to be specific and focus on core concerns.



Client's question—What are my problems, issues, concerns and undeveloped opportunities?

Understanding stage



4-3-3

Stage 2—Understanding and insight promoting new perspectives

This stage is also the stage of looking at the preferred scenario, also called the middle stage. Now that rapport has developed and the client has aired some of the issues, a greater depth of understanding can be reached. The preferred scenario or preferred state of affairs helps clients determine what they need and want. It spells out possibilities for a better future and culminates in the client's agenda for change fashioned from those possibilities. The client's commitment in pursuing substantial priorities or goals is encouraged from the start.

The skills of stage 1 are still appropriate, with extra skills needed to draw together themes, offer new perspectives, provide accurate empathy, work in the here-and-now, promote self-disclosure, help set appropriate goals, and be genuine in support. The core conditions are still essential here as change involves risk. The client must feel supported, yet challenged, to face the difficulties ahead. By the end of stage 2, the client will have an idea of how they want to change.



Client's question—What do I need or want in place of what I have?

Action



4-3-4

Stage 3—Action

The aim here is to develop goal-accomplishing action strategies by helping clients discover how to get what they want. It defines the work that needs to be done to translate priorities into problem-managing accomplishments. The key tasks here are to help the client find a realistic set of choices, make decisions and formulate an action plan, and to assist the client to implement the plan.

- Clients need to be helped to see that there are different ways of achieving their goals or possible actions leading to them.
- They then need to be helped to choose best-fit strategies according to their talents, resources, styles, temperament and timetable.
- Clients next need help to craft a plan and organize the actions they are going to take to accomplish their goals.

Remember, it is the client who chooses the course of action, and the counselor needs to know different decision-making strategies and problem-solving techniques to help the client do this. In some models the action or implementation stage is left to the end while in some it is acknowledged that clients need to act right from the beginning, both within the counseling session and in their real day-to-day worlds.

? Client's question—What do I do to get what I need or want?

It is helpful to continually evaluate how the client and the counselor are doing. The above model is simplistic but useful as a guide. Counseling involves a wide range of skills and techniques that will be appropriate at different times.

The counseling process is not a linear one; that is, it does not necessarily follow the mentioned stages in order. The counselor needs to be aware of which stage the client is at, and when it is appropriate to facilitate moving the client to the next stage. This decision is the client's, though; the counselor offers guidance but does not make the decisions.

Key components of a counseling session

Counseling environment



4-3-5

The counseling environment or room should be a quiet and private place with no noise or interruptions. It should be clean, in cool colours and with comfortable seats that demonstrate equality and not dominance.

Welcoming of the client

Clients appreciate a warm and friendly welcome from counselors who are genuine and interested in them, and this is what counselors should offer their clients when they come for counseling.

Contract

Only when there is a clear contract between client and counselor does the interaction become counseling rather than using counseling skills. If ‘helping’ is to be a collaborative venture, then both parties must understand what their responsibilities are. The client and the counselor in a process referred to as ‘structuring’ should arrive at similar perceptions of the role of the counselor, an understanding of what occurs in counseling, and an agreement on what outcome goals are to be achieved.

Confidentiality

Confidentiality is one of the most important things that clients appreciate and expect of a counselor. Counselors get access to privileged information about clients, and they are duty bound to keep it all confidential to safeguard the client’s welfare. When clients know and trust that what they disclose about themselves will remain confidential, they are less likely to withhold anything, and in this way they are able to get more help with what is disturbing them.

Counselors must keep information related to counseling services confidential unless disclosure is in the best interest of the client, is required for the welfare of others, or is required by the law. When disclosure is required, only information that is essential is revealed. The client should be informed about these conditions before taking the HIV test. Clients’ records, audio- and videotapes must be treated with confidentiality and stored safely. Clients must give consent for anyone to observe or listen to the sessions, tapes or records. Clients’ identity must be disguised when any material is used for training, research or publication.

Qualities and personality of a good counselor



Have participants carry out the following exercise on the qualities of a good counselor:

- Consider when you had what seemed at the time to be a difficult problem, causing you real concern. If you cannot remember such a situation, then imagine it.
- In your mind, identify someone you would have been confident to approach to help resolve the problem.

- Think of the qualities that this person has that you admire or that would make you go to him or her.



List the qualities of this person as you identify them.

These are among the qualities of a good counselor, and underlying the skills are these attitudes, which will be instinctively recognized by the client.

Research has shown that what helps people make changes for the better in their lives is not so much the expertise of the counselor but more the relationship that is created, which allows the client to take on the responsibility of making the necessary decision or solving the problem.



4-3-6

Counseling relationship

A helping relationship

The relationship between client and helper is important and central to helping.

Carl Rogers² in his humanistic approach claimed that the quality of the relationship with respect to the unconditional positive regard, accurate empathy, and genuineness offered by the helper and perceived by the client was both necessary and sufficient for therapeutic progress. Such client-centred counselors help clients to understand themselves, liberate their resources and manage their lives more effectively.

To create this relationship, according to Rogers and many others, the counselor needs to have three essential qualities. These are considered the core conditions of counseling:

Unconditional positive regard includes respect, warmth and acceptance.

Acceptance is the non-judgemental expression of a fundamental respect for the person as a human, and acceptance of a person's right to their feelings. It includes 'positive regard'—an ability to treat the client as a person, to take what the client says as of value, and to hold a belief in the dignity of the client.

Respect is a way of viewing oneself and others. Acceptance is the ability and willingness to see and accept the client's explanation of a situation even if it is different or even contradictory to the counselor's own view.

² Carl Rogers, *On becoming a person: a therapist's view of psychotherapy* (Constable, 1961) ISBN 0 09 460 440 1

Positive regard includes commitment on the part of the counselor, confidentiality, encouragement toward self-responsibility, and refusal to let the client be dependent on the counselor. Counselors should therefore do no harm, be competent and committed, make it clear that they are for the client, assume the client's goodwill, not rush to judgement, and keep the client's agenda in focus.

Genuineness. The counselor's interest must be real, authentic, sincere, congruent, not fake. The self that the client meets should be the real one and not an act put on just for the session. The interest in the client should be sincere, not phoney, and should go beyond professionalism. One's external expressions should match with the inner experiencing, such that what one says and does reflects what one is feeling or thinking. Avoid overemphasizing the helping role or becoming defensive.

Empathy is the act of perceiving the internal frame of reference of another, of grasping the person's subjective world, or standing in the other person's shoes without losing one's own identity. It involves communicating to the client an understanding of their feelings. Listening to someone carefully, struggling to understand their concerns and sharing that understanding with them makes clients feel understood and is one thing they appreciate very much about counseling.

Sometimes empathy is confused with sympathy. Sympathy is feeling sorry for someone and for the situation in which they find themselves—for example, we feel sorry for the victims of tragedies or natural disasters.



4-3-7

Basic counseling skills



Ask the participants to mention some of the basic counseling skills they know and write these on the flip chart. Do not spend more than 5 minutes on this brief introduction, then quickly proceed with the transparency and the following information.

The counselor uses discrete units of verbal, non-verbal or para-verbal behaviour to help clients through their process of exploration, understanding and action. These are basic communication skills. People use them knowingly or unknowingly every day in their day-to-day life. Counseling skills most commonly used:

Attending is to demonstrate that you are with the client or are visibly tuned in to clients. People appreciate it when others pay attention to them. Being ignored can be painful. Effective attending tells the client that you are listening and it puts you in a position to listen carefully to the client's concerns. Attentive presence can invite or encourage clients to trust the counselor, open up and explore the significant dimensions of their problem situations. To attend to clients, counselors can use the SOLER skills:

- S** – Sitting squarely facing another person is considered a basic posture of involvement. It usually communicates one's presence and availability. If for any reason facing the person squarely is too threatening, then an angled position may be more helpful. The quality of your presence is the most important.
- O** – Open posture should be adopted. Crossing the legs and arms can be signs of lessened involvement with others or less availability to them. Open posture may signify that you are open to the client and to what the client is saying. The client sees it as a non-defensive posture. Crossing the legs may not always mean that one is not involved with the client, but what is important is for one to be aware of how your presence communicates openness and availability to the client.
- L** – Leaning forward towards the other at times is a natural sign of involvement. It is a sign of bodily flexibility or responsiveness that enhances the counselor's communication with the client.
- E** – Eye contact should be maintained, but it should not be confused with staring or glaring. Maintaining good eye contact with a person is another way of communicating your presence, interest and that you want to hear what the other person has to say. Looking away may communicate the opposite. It is helpful for counselors to explore why they may be uncomfortable or unwilling to maintain eye contact with certain clients.
- R** – Being relatively relaxed and natural when doing all of the above is important. This may mean not fidgeting nervously or engaging in distrustful facial expressions. It also means becoming comfortable with your body as a vehicle of personal contact and expression.

If the above internal attitudes are not reflected in your external behaviour, then being respectful, genuine and caring might lose impact. However, these are just guidelines and not rigid rules, and counselors must put into consideration the client's culture as well as their own.



Active listening

4-3-8



Pair up participants and have them practise listening to each other as they talk about their personal concerns about HIV for 2 minutes each. Then have the group discuss what they experienced both as counselor and as client.

When one effectively attends, one is in a better position to listen carefully to what the client is saying both verbally and non-verbally. Listening seems like a simple concept to grasp and yet it is amazing how often people fail to listen to one another. Active listening helps establish rapport and trust, bridge differences; it helps clients disclose their feelings; it helps gather information and create a base of influence; it helps clients assume responsibility. People want the presence of the other person—not only the physical presence, but also their presence psychologically, socially and emotionally. Complete listening involves

- ⇒ listening to and understanding the client's verbal messages
- ⇒ observing and reading the client's non-verbal behaviour—posture, facial expressions, movement, tone of voice
- ⇒ listening to the context—the whole person in the context of the social settings of their life
- ⇒ listening to sour notes—things the client says that may have to be challenged

Barriers to listening, both internal and external, should be worked on and avoided. The session should be uninterrupted by phones, note taking, noises, visitors, as important information may be lost or the person may not say what the problem is.

A good listener should possess an attitude of respect, tune in to the client's internal viewpoint, send good voice messages, send good body messages, use openers, small rewards and open-ended questions, paraphrase and reflect feelings, show understanding of context and difference, manage initial resistance and avoid unrewarding 'don'ts'.



Paraphrasing

4-3-9



Pair the participants and have them practise paraphrasing by one telling the other what they most appreciate about this workshop. After 2

minutes have them change roles. Then have the group discuss what they experienced both as counselor and as client.

Paraphrasing is when counselors repeat what the client has said using different words. It shows comprehension while actively listening and provides mirror reflections that help clarify the original statements and make them more succinct. The paraphrase should begin with 'you' to reflect the client's internal viewpoint.



4-3-10



Reflecting feelings

Pair up the participants and have them practise reflecting the client's feelings by one telling the other what they feel when they don't get what they want at work. The 'counselor' identifies the feeling of the 'client' and reflects it back to the client. After 2 minutes have them change roles. Then have the group discuss what they experienced both as counselor and as client.

The counselor should be able to pick up the client's feelings. Reflecting feelings involves feeling a client's flow of emotions and experiencing and communicating this back. Good reflection of feelings picks up these inner messages as well and entails responding to the client's 'music' and not just to the words.

Questioning

Questioning is a skill used to identify, clarify and break problems down into their component parts. It also helps clients to identify their feelings. Open-ended rather than close-ended questions should be used. Open-ended questions give clients considerable choice in how to respond and are aimed at leading into a discussion. Examples are the 'how', 'what', 'when' questions. Closed-ended questions restrict choice and lead to one-word yes or no answers. They should not simply be for the selfish purpose of satisfying the counselor's curiosity or need. Questions should not be probing or interrogative in nature, such as 'why' questions.



Ask the participants to come up with examples of open-ended and close-ended questions. Write them on a flip chart and lead a discussion about them.


Clarification

After brainstorming with the participants, fill in the gaps with the following information.

People are seldom able to explain something factually and in sequence. More probably they go round and in circles, and indeed the first problem they talk about is often not the one that emerges in the end—for example, talking about a problem of lateness at work caused by oversleeping or bad performance at work because of tiredness may uncover some family or health problem that might otherwise have remained hidden. Counselors try to clarify what the client has said and get factual information.

The counselor must never ‘rescue’ the client or take over the client’s problem. It is the responsibility of the client to decide upon and implement their own solution.

Summarizing


 Brainstorm with the participants then use the following information to fill in the gaps.

Summarizing pulls the threads together so that the client can see the whole picture and gain greater understanding of it. It helps to ensure that the client and the counselor understand each other correctly. The counselor should review the important points of the discussion and highlight any decisions.

Supporting

Finally having made the decision, the client may need support and encouragement to keep going.

Common counseling mistakes

 Have participants brainstorm on common counseling mistakes and then fill in the information gaps using the following.

The principles of counseling are easy to learn but difficult to apply, and counselors can make mistakes, such as—

⇒ controlling rather than encouraging the client’s spontaneous expression of feelings and needs

- ⇒ judging, as shown by statements that indicate that the client does not meet the counselor's standards
- ⇒ moralizing, preaching, and patronizing—telling people how they should behave or lead their lives
- ⇒ labelling, rather than finding out the person's motivations, fears and anxieties
- ⇒ reassuring unwarrantedly—trying to induce undue optimism by making light of the client's own version of a problem
- ⇒ not accepting the client's feelings—saying that they should be different
- ⇒ advising, before the client has had enough information or time to arrive at a personal solution
- ⇒ interrogating—using questions in an accusatory way; 'why' questions may sound accusatory
- ⇒ encouraging dependence—increasing the client's need for the counselor's continuing presence and guidance
- ⇒ cajoling—trying to persuade the client to accept new behaviour by flattery or deceit

Working with couples

Clients coming for HIV/AIDS counseling should be encouraged, but not forced, to come with their partners or as couples. Counselors need to have some knowledge about how to work with couples. Various approaches or theories govern the practice of couples counseling, for example, psychodynamic, cognitive behavioural and family models.

Couple counseling is encouraged:

- Some people seek counseling as a couple, because they recognize that their problems are rooted in their relationship rather than being attributable to individual issues.
- A change in either partner's sexual behaviour is bound to affect the other partner.
- When couples work together in partnership and support they are bound to succeed better in what they want to do than if one partner is in the dark.
- Disclosing HIV test results to the other partner, which is usually a difficulty for most couples, is better handled if both agree to be seen as a couple.

- Couples are better able to cope with such decisions as whether or not to get pregnant, terminate a pregnancy, breastfeed the baby if they are seen and supported together.



Guidelines for working with couples

4-3-11

- Create a conducive and trusting relationship with the couple.
- Contract with both of them.
- Let them know that there will be equal air space for both of them.
- Let them know that everyone's opinion is important.
- Let the dominant-looking partner start, especially if it is the husband, as this may influence how their action is implemented once they get home.
- Pay much attention to both their verbal and their non-verbal communication.
- If asked whether you are married, say the truth; if you are not married, add that you are trained to work with couples.
- Try politely to draw out the silent partner of the couple, to share their feelings and opinions.
- Do not judge or take sides.
- Keep your values, prejudices and beliefs aside and work with those of the couple.

Map of counseling territory

Counseling is a relationship within which a range of skills is used to initiate a process of positive change, from

- dissatisfaction to satisfaction
- pain to comfort
- low esteem to high esteem
- poor social skills to good social skills

4-3-1

Exploration stage

Aim—to establish a safe, trusting relationship

- ◆ Client's role
 - Tell their story
 - Break through blind spots
 - Choose the problems or opportunities to work with
- ◆ Counselor's role
 - Stay with the client's agenda
 - Use appropriate counseling skills
 - Help client focus on core concerns

4-3-2

Understanding stage

Aim—to help client reach a greater depth of understanding

- ◆ Client's role
 - Identify preferred scenario
 - Clarify what they need and want in place of what they have
- ◆ Counselor's role
 - Use appropriate skills of support and challenge

4-3-3

Action

Aim—decide on change, implement change, transfer learning

- ◆ Client's role
 - Explore how to get what is wanted, needed
 - Choose course of action, implement and evaluate it
- ◆ Counselor's role
 - Help client plan a course of action, refine and implement it

4-3-4

Key components of a counseling session

- ◆ Counseling environment
- ◆ Welcoming of the client
- ◆ Contract
- ◆ Confidentiality

4-3-5

Counseling relationship

Counseling is a helping relationship. Its core conditions are—

- ◆ unconditional positive regard
- ◆ genuineness
- ◆ empathy

4-3-6

Basic counseling skills

- | | |
|---|--|
| <ul style="list-style-type: none"> ◆ Non-verbal <ul style="list-style-type: none"> – listening, attending and observing ◆ SOLER <ul style="list-style-type: none"> – S - sit facing client – O - adopt open posture – L - lean forward to listen – E - maintain eye contact – R - stay relaxed | <ul style="list-style-type: none"> ◆ Verbal <ul style="list-style-type: none"> – paraphrasing – reflecting feeling – questioning – clarifying – summarizing – supporting |
|---|--|

4-3-7

Active listening

- ◆ Understanding the verbal message
- ◆ Observing non-verbal behaviour
- ◆ Listening to the context
- ◆ Listening to your notes

4-3-8

Paraphrasing

- ◆ How to paraphrase
 - repeat meaning of what client says
 - but use different words
- ◆ How it helps
 - shows understanding
 - provides a mirror

4-3-9

Reflecting feelings

- ◆ Pick up on client's feeling
- ◆ Feel with client the flow of emotions
- ◆ Communicate back
- ◆ Respond to client's 'music'

4-3-10

Working with couples— guidelines

- ◆ Create a trusting relationship.
- ◆ Contract with both.
- ◆ Assure equal air space.
- ◆ Everyone's opinion is important.
- ◆ Let dominant one start.
- ◆ Observe both verbal and non-verbal communication.
- ◆ Tell the truth about your own marital status.
- ◆ Encourage the silent one of a couple to share feelings.
- ◆ Do not judge.
- ◆ Keep your own values and prejudices aside.

4-3-11

Unit 4

Voluntary counseling and testing for HIV

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4-4-1

Voluntary counseling and testing for HIV



Voluntary testing is the anonymous or confidential testing initiated by either the client, the health provider or other persons and performed with the client's informed consent. It is useful for . . .

- ⇒ those who wish to know their HIV status
- ⇒ women in antenatal clinics who would like to know whether they are infected before making decisions about childbearing or breastfeeding
- ⇒ help in making a diagnosis of HIV infection when it is suggested by clinical signs and symptoms

Counseling for VCT



4-4-2

Voluntary counseling and testing

Antibody testing should be offered only when it can be accompanied by counseling before and after the test. This guarantees informed consent, confidentiality, clear information about the test and its implications, and—most importantly—emotional support.

'Informed' means that in the pretest discussion, the client has been made aware of all the ramifications of HIV testing, including the risks and benefits, as well as of alternatives to such testing, in a language that the client can understand.

'Consent' means giving express agreement to HIV testing in a situation free of coercion, in which the client should feel equally free to grant or to withhold consent.

The disadvantage of having the test voluntary is that not everyone will be aware or convinced that they are at risk and therefore may not be reached. Even those who know they are at risk may not choose testing when it is voluntary.

However, testing people without their informed consent is coercive and has no advantage over testing with informed consent. Such mandatory testing has no place in HIV prevention and care programmes. Most people who do not want to test are concerned about confidentiality, and others are afraid that if the results are positive, they will be unable to cope with the situation. These are valid fears, and counseling and support can help clients overcome them.

In counseling patients about having an HIV antibody test, it is important to discuss current personal advantages and disadvantages in having the test. This helps patients make informed decisions. Following are examples:

What are the advantages and disadvantages of HIV testing?

Disadvantages

Stress and uncertainty
may increase

Restrictions are placed on mortgage and
life insurance and for job opportunities

Social stigma is attached to a positive
HIV antibody test result

Maintaining a secret causes stress

Making and maintaining
relationships is difficult

Advantages

Knowledge of the result can reduce
stress

Decisions about the future might be
made more easily

Motivation to protect
sexual partners is increased

Symptoms can be identified and
treated promptly

Prophylactic treatment can be given



For whom is VCT?

4-4-3

People who are considering being tested must be given the information they

4-4-4

need to be able to make a well-informed decision. The information must be up to date and cover the technical aspects of testing as well as the medical and social implications.



Counseling helps discuss

4-4-5

Counselors should be able to discuss with their clients the misconceptions and anxieties that the clients may have about HIV antibody testing. Counselors should ensure that their clients understand what the test implies, and what a positive or a negative result means. Many people believe that a positive antibody test means that they have AIDS, and this will likely cause them distress.

The counselor should stress that the available tests detect the presence of HIV antibodies in the blood and should add that current evidence suggests that all those infected will eventually develop AIDS. The counselor should emphasize that one can live a useful life for long after being diagnosed if they receive proper counseling.

Counseling for people who test HIV antibody negative should begin immediately as people who test negative may feel relieved and believe that they can continue to live in the same way as before. They should be told about the window period, which is the period of 3 months or longer after the last exposure to possible infection, during which the test results may be negative or equivocal. They should be told what they should do to prevent acquiring or passing on the infection during this time. They should be urged to return for follow-up counseling and for a repeat test after 3 months.

All donated blood and organs should be tested for HIV antibody. Potential donors should be informed about this beforehand and offered post-test counseling if they want to know their results. Confidentiality must be ensured throughout testing.

Stages of counseling in VCT

The three stages of HIV counseling in VCT are pretest, post-test, and ongoing or follow-up post-test.



4-4-6

Pretest counseling



Pretest counseling

Pretest counseling is the dialogue between a client and a caregiver aimed at discussing the HIV test and the possible implications of knowing one's HIV serostatus, which leads the client to an informed decision whether or not to take the test.



4-4-7

Content of pretest counseling

- Establish a relationship of trust to help the dialogue and to form a basis for post-test counseling.

- Explore the client's knowledge about HIV and reasons for taking the test. Provide the needed information.
- Prepare for the test procedure and the wait for the result. Review the test procedure.
- Anticipate the emotional and psychological responses to the result.
- Anticipate the effect on client's relationship with others.
- Discuss the practical consequences of being tested—personal, medical, social, psychological and legal.
- Discuss avoiding infection or transmission of the virus and the behavioural changes this will possibly require.
- Explain and obtain informed consent.

The client should be told that both false-positive and false-negative results occasionally occur, although subsequent confirmatory tests are reliable. The client should be given information about the window period.

The agenda within the session should be flexible. If the client decides that some of the topics are irrelevant, the counselor should respect this. Sometimes the pretest session may turn out to address the underlying concern, for example, a particular relationship. For this reason, counselors need to be trained to do general counseling as well.

The counselor needs to be neutral and should not guide a client towards a particular outcome, since clients should be left to make their own decisions according to their own circumstances.



4-4-8

Post-test counseling



Steps in post-test counseling

Post-test counseling is a dialogue between a client and a care provider aimed at discussing the HIV test result, providing the appropriate support, information and referral, and encouraging risk-reducing behaviour.



Aims of post-test counseling

4-4-9

Aims

- Help someone understand their test result.
- Assist with the shock or the emotional response to the result.
- Provide information on the need for medical attention for those with positive HIV results.
- Help the client prepare for the kinds of personal support they want from those close to them or from any voluntary organizations.
- Whom to tell—assist client in their conflict of wanting to tell someone to ventilate and ease their heightened emotion and their need to control other people's knowledge of their status, especially if positive, but sometimes even when negative.
- How to tell significant others—support the client in their decision to tell immediately, planning on how to do it at a time best for them or to have a counselor present as they tell.
- Follow-up appointments—arrange for an appointment after the first post-test session, because the client's needs change as the emotional shock of the results subsides.



Negative results

4-4-10

- Establish a trusting relationship.
- Disclose the results immediately.
- Discuss the meaning of a negative result.
- Remind client about the window period and ask client to consider returning for a repeat test after 3 to 6 months.
- Discuss how further exposure may be prevented.
- Repeat explanations about positive health behaviour.
- Address issues of the 'worried well'.



Positive results

4-4-11

- Maintain the trusting relationship.
- Disclose the results immediately.

- Ensure that the person understands what a positive result means.
- Give client opportunity to express how they are feeling.
- Provide support to help the client deal with those feelings.
- Discuss their plans for the immediate future.
- Schedule appointments for medical evaluation and follow-up counseling.
- Schedule appointment for counseling partner(s) if possible.
- Refer client to any available support organizations in the community.



Equivocal or indeterminate test result

4-4-12

An equivocal test result is one that is neither clearly positive nor clearly negative. The counselor should consider the type of test used, retest the sample, and if still equivocal, then retest using another ELISA (a different technique). A second fresh sample as well as the first one should be tested after 3 months. If this is equivocal, then the client is negative.

Prevention and support following an equivocal result is important. The counselor should emphasize the importance of using safer sex during the waiting period. The client should be psychologically supported during this trying time.

Follow-up counseling



Follow-up counseling is regular counseling on short- or long-term contracts for clients living with HIV/AIDS.

4-4-13

Aim

- To help clients who are not coping effectively with their situation
- To assist those who are extremely distressed by their status
- To assist those who are extremely distressed by the responses of other people

Note—counselors working with these clients require competencies of generic counseling (more in-depth, theoretically based counseling training) as well as knowledge of HIV-related issues. This is because some of the client's issues go beyond HIV-related issues.



Content of follow-up counseling

4-4-14

- Concerns about relationships—sexual and other
- Avoidance of HIV transmission
- Issues related to death and dying
- Disease progression and personal implications
- Coping with own feelings—grief process that includes shock, denial, anger, guilt, loneliness, depression, suicidal thoughts, hopelessness, helplessness
- Practical, financial and employment issues
- Whom to tell and how to tell
- Stigma, fear of isolation and prejudice
- Living a healthy lifestyle
- Need for reassurance about confidentiality
- Implications of HIV antibody test



Who will counsel?

4-4-15

HIV antibody testing in antenatal clinics



Ask the participants to read the material below as an exercise. The information here will be vital for the role-plays on pre- and post-test counseling.

Reasons for offering HIV antibody test to pregnant mothers and perhaps to the fathers

- Transmission of HIV can be prevented:
 - ⇒ from mother to child
 - ⇒ from one sexual partner to another
 - ⇒ to health care staff who come into contact with patient's blood and where invasive procedures have been performed
- Decisions have to be made as to whether or not an infected mother should use antiretroviral drugs.

- Decisions have to be made as to whether or not an infected mother will breastfeed her baby. Need to explore pros and cons of breast milk and breast-milk substitutes for the mother and the baby.
- Decisions have to be made as to whether or not the sexual partner or father will be informed and encouraged to be tested.
- Follow-up care and surveillance for a known HIV-antibody-positive mother and her family will need to be provided—medical care, living conditions, child-care arrangements, social support.
- Pregnant women with HIV infection need intensive counseling on family planning options for the future.

Specific issues in antibody testing in antenatal clinics

- Infection control—universal precautions must be adhered to and staff reassured of their occupational safety.
- Busy clinic—introducing HIV counseling in antenatal clinics will increase the workload. Specialist counselors can be called upon but staff in the clinics will need to develop strategies for coping with the busy clinics.
- Timing of the HIV antibody test—ideally is before pregnancy. During pregnancy it is advisable to test as early as possible so that consideration can be given to antiretroviral therapy. This may mean booking women earlier than usual. Because of the window period women may need to be retested 3 months later in the course of pregnancy if exposure has been very recent. Also the options of interventions for both mother and obstetrician are fewer if the HIV test is done at a late stage in pregnancy.
- Management of the HIV-positive mother:
 - ⇒ Counsel client to help her make informed decisions.
 - ⇒ Explore views about using antiretroviral drugs and avoiding breastfeeding.
 - ⇒ ‘Dreaded issues’ need to be raised with mothers who choose not to breastfeed.
 - ⇒ Emphasize taking precautions during sexual intercourse.
 - ⇒ Consider whether the father will be informed and tested.
 - ⇒ Have a physician monitor the mother from the HIV point of view.
 - ⇒ Provide a paediatrician to be on the scene at an early stage.

- Management of the antibody-positive father:
 - ⇒ If the mother is HIV positive, chances that the father is also positive are very high.
 - ⇒ Discuss with the mother the need to counsel and test the father.
 - ⇒ In cases where the father is positive and the mother negative, the mother should be tested 3 months after the first test. This is because seroconversion of the mother may take place during the course of pregnancy, which will carry an increased risk of transmission to the baby.

What to include in the counseling session

- Greetings, introduction and establishment of rapport: ‘Good morning, Mrs Otieno. Welcome to our clinic. Please take a seat. My name is Jane. I am a counselor. How may I help you today?’
- Introduction to HIV antibody testing: ‘Mrs Otieno, as you know, in our clinic we offer the HIV antibody test as a routine to all expectant mothers. What do you understand about why we offer this test?’
- Knowledge about AIDS and transmission of HIV.
 - ⇒ ‘How might someone in your position come to be infected with HIV?’
 - ⇒ ‘What do you know about AIDS?’
 - ⇒ ‘What do you understand about the risk to the unborn child if the mother has HIV?’
 - ⇒ ‘If the father is positive, what do you know about the risk to the mother and the unborn child?’
- Knowledge about HIV antibody test: ‘What do you know about the HIV test?’
- Assessing the risk for HIV: Explore issues relating to past sexual practices, drug use, blood transfusion and artificial insemination by donor. Assess whether there has been rape or sexual abuse in the past.
 - ⇒ ‘Have you had any sexual contacts outside of this relationship in the past?’
 - ⇒ ‘Do you think your husband or partner has been at risk in any way?’

- Talking about having the HIV antibody test
 - ⇒ 'Do you agree to have the HIV test?'
 - ⇒ 'You say that you do not want to have the test. What do you fear most about having it?'
 - ⇒ 'If your partner were here today, would he agree with your decision not to have the test?'
 - ⇒ 'If your results were positive, what would be your views about antiretroviral drugs and avoidance of breastfeeding? Would your partner agree with this?'
 - ⇒ 'If the results were negative and you knew there might be some risk, would you agree to have another test in 3 months time?'
 - ⇒ 'When we give you the results would you like to come on your own or with your partner?'

VCT definition

- ◆ anonymous or confidential testing
- ◆ initiated by client *or*
- ◆ referred by provider or other persons
- ◆ client's informed consent always

4-4-1

Counseling for VCT

- ◆ If HIV testing results are to be given out, counseling should always be provided.
- ◆ Counseling for HIV testing is essential for—
 - informed consent
 - confidentiality
 - clear information about test
 - emotional support

4-4-2

For whom is VCT?

- ◆ Those who wish to know their status—
 - for marriage
 - for decisions about childbearing
 - for planning life in general
 - as part of risk reduction
 - anxiety about symptoms
- ◆ Women giving antenatal care

4-4-3

For whom is VCT? (contd)

- ◆ For clinical diagnosis when referred by clinician
- ◆ For other purposes
 - insurance
 - immigration
- ◆ For post-exposure prophylaxis (PEP)

4-4-4

Counseling helps discuss—

- ◆ Misconceptions and anxieties about the test
- ◆ What a positive or a negative test means
- ◆ Prognosis if one tests positive
- ◆ Window period if negative
- ◆ Risk reduction for positive and negative

4-4-5

Pretest counseling

The counselor—

- ◆ Discusses HIV test with client
- ◆ Discusses implications of knowing HIV status
- ◆ Helps client make informed decision

4-4-6

Content of pretest counseling

- ◆ Establish relationship
- ◆ Explore knowledge of HIV and reasons for testing
- ◆ Prepare for test
- ◆ Anticipate reactions and effect on relationships
- ◆ Prepare for practical consequences
- ◆ Prevent infection or transmission
- ◆ Explain and obtain informed consent

4-4-7

Steps in post-test counseling

- ◆ Discuss HIV test results
- ◆ Provide support
- ◆ Provide referral information
- ◆ Encourage taking preventive measures

4-4-8

Aims of post-test counseling

- ◆ Help understand results
- ◆ Assist with shock and emotional response
- ◆ Provide information on medical care
- ◆ Help prepare for personal support
- ◆ Discuss whom to tell
- ◆ Set up follow-up appointments

4-4-9

Negative results

- ◆ Explain window period
- ◆ Consider repeat testing
- ◆ Address issues of the worried well
- ◆ Discuss preventive measures

4-4-10

Positive results

- ◆ Ensure understanding of results
- ◆ Allow expression of feelings
- ◆ Provide support for feelings
- ◆ Discuss immediate plans
- ◆ Make appointment for follow-up counseling
- ◆ Refer for support

4-4-11

Equivocal results

- ◆ Consider type of test and retest with a different test
- ◆ Retest after 3 months
- ◆ Support in the meantime
- ◆ Practise prevention in the meantime

4-4-12

Definition of follow-up counseling

Regular counseling on short or long term

- ◆ to help cope with client's situation
- ◆ to deal with extreme distress
- ◆ to deal with responses from other people

4-4-13

Content of follow-up counseling

- ◆ Relationships—whom to tell?
- ◆ Prevention
- ◆ Death and dying
- ◆ Disease progression—living a healthy lifestyle
- ◆ Own feelings
- ◆ Practical financial issues
- ◆ Stigma, prejudice and confidentiality

4-4-14

Who will counsel?

- ◆ All ANC and MCH staff in pilot sites are to receive full training on the MTCT course
- ◆ Counselors of care and support organizations will provide ongoing counseling
- ◆ Some HIV+ mothers will be trained and employed as peer counselors

4-4-15

Unit 5

Counseling on safer sex

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Counseling on safer sex

↓ Introduction

- ☹ Introduce the topic with the paragraph below and then ask the participants to discuss sexual behaviour change using the questions following.

Sex is a special topic that evokes much anxiety, pleasure, pain, hope, discussion and silence. Sexual behaviour is part of social norms, and individuals cannot alter these on their own or overnight. People satisfy various individual needs through sex (refer to Maslow's hierarchy of needs).¹ It helps you as a counselor to examine what need of yours is satisfied by sex. For you to help others explore personal sexual issues, you must first explore and confront your own sexuality. As you advocate behaviour change, ask yourself the following questions about it:

- ⇒ change to what?
- ⇒ change for what?
- ⇒ change for how long?
- ⇒ change for whose sake?
- ⇒ change dictated by whose values and needs?
- ⇒ change with what power and resources for women?

Safer sex

Behaviour change to safe sexual practices cannot be measured by the amount of information people have been given or the level of awareness of one's own risk. Some believe that they are OK because their partners are, some believe that they will never get HIV. Some believe that they should share their HIV-positive partner's fate. Some people will practise safe sex only sometimes, and some all the time. Others will change their behaviour only after their partner is discovered to be HIV positive and others will not change even then.

¹ A.H. Maslow, *Motivation and personality* (New York: Harper, 1954).

It is important to let women grow into a safer and more satisfying sexuality from the start by offering everyone information and the means to protect themselves in both the short and the long term.



Common safer sex strategies

4-5-1

Be faithful to one partner

Works as long as . . .

- ⇒ neither partner has HIV
- ⇒ neither partner is not at risk from other sources of infection
- ⇒ partners are faithful to one another all the time

Does not work with . . .

- ⇒ women whose partners are not faithful to them
- ⇒ women who already had HIV before the relationship

Note—people wishing to use this strategy should receive VCT and remain mutually faithful to one another.

Say NO to sex

Works well with . . .

- ⇒ young people who can manage to delay starting sexual relations until they marry; then if they remain faithful to each other, their risk is greatly reduced
- ⇒ those who want to protect their partners without having to reveal their HIV status or how they became infected; however, the partner may feel totally rejected and suffer psychologically
- ⇒ those who are separated for short periods from their regular partner, for example, migrant workers not living with spouses

Does not work with . . .

- ⇒ those who definitely want and choose to have sex
- ⇒ those women who may be unable to say NO to sex even if it is negative, demeaning or risky because of negative experiences or social or economic dependency
- ⇒ those whose form of saying no is deserting partners with HIV/AIDS

Losing a partner can be disastrous, and both deserted and deserting men and women can turn to others for sex for various reasons such as, for a poor woman, economic gain.

Note—saying NO to sex is the most effective safer sex strategy, but in practice it may be difficult to implement. It or mutual faithfulness are the strategies that religious leaders advocate.

Use a condom

This strategy is safer than unprotected sex. The more it is used, the lower the frequency of exposure. Consistent and correct condom use can result in nil rates of HIV transmission. Using a condom with every partner and in every act, however, is not an easy task.

Most people are willing to use condoms only sometimes, during casual sex but not with their spouses or partners. Others are unwilling to question or threaten love or trust. Some women fear violence or desertion if they suggest condom use. Sex workers may be too desperate for money to turn away men who refuse to use condoms.

Those who are HIV positive and have not yet disclosed their condition to their partners may fear being asked if they are HIV positive and continue to have unprotected sex. The fear of rejection in an HIV-positive person may force some to be unfaithful to satisfy their sexual needs with those for whom they do not feel responsibility.

Many people may not know how to acquire, store or use condoms correctly and yet are too shy to admit it. Some people believe that condoms interfere with sexual pleasure.

Some positive points are that some men are able to maintain a longer erection time with condoms and they can also be used as sex toys. Some women find condom use less messy, especially those who dislike the wetness of the seeping semen and the bad vaginal odour that follows sex.

Condoms are a form of contraception and a prophylactic protection.

Consider alternatives to penetrative sexual intercourse

Finding safe alternatives to intercourse does not mean stopping sex. It simply means replacing intercourse with other pleasurable practices—all of the time to be very safe, or some of the time to reduce risk.

Some people, for example religious leaders, believe sex to be for procreation. The dominant male-centred point of view is that sexual intercourse is essential for male sexual pleasure.

Alternatives to intercourse are petting, engaging in mutual or self-masturbation, having sexual fantasies, practising oral sex, using non-abrasive sexual aids, fingering, viewing pornography, talking about sex, watching sexual dances. Some people, however, find non-penetrative sex immature, unnatural, perverted, abnormal or dirty.

Counseling role-plays

Preparing for role-plays



Ask the participants to divide themselves into groups of 3 to a group. Each group selects a counselor, a client and an observer. Allocate an equal number of groups to each of the following categories: pretest counseling; post-test counseling of an HIV-positive case, and post-test counseling of an HIV-negative case. Then have each group prepare a counseling case study that they can use for their role-play. Have the participants rehearse their role-plays as if they were preparing to perform a drama. Each role-play should last for 5 minutes. Following each role-play, the group observer kicks off a 5-minute discussion commenting on the skills displayed.

All 3 members of a group should help the person in the counselor role to prepare a good show by referring to the lessons learned in counseling throughout the course. The participants should have at least 30 minutes to prepare their role-play. While preparing, every person in each group should practise the counselor role.

Performing role-plays



Inform the participants that they will perform the role-plays one after another. Estimate the length of this session by multiplying the number of groups by 10 minutes. For example, a group of 30 participants will have 10 groups of 3 each = 100 minutes, or 1 hour and 40 minutes, to perform and discuss the role-plays. Add the 30 minutes for group preparation and 20 minutes for breaks between groups. Thus allow 2 hours and 30 minutes for the whole role-play session.

Before each role-play begins, the person playing the role of the counselor arranges two chairs in the front of the whole group of participants to reflect an ideal counseling room. The discussion following one role-play helps the next role-players to improve their skills, and the role-plays that come later should be much better than the earlier ones.

Safer sex

- ◆ Be faithful to one partner
- ◆ Say NO to sex
- ◆ Use a condom
- ◆ Consider alternatives to penetrative sex

4-5-1

Unit 6

Counseling supervision and support

prepared by

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Counseling supervision and support

Use the following text to introduce the topic of counselor stress and how supportive supervision can help counselors to cope with it.

Challenges counselors face and the need for counselor supervision

The helping relationship requires the counselor's commitment, and counseling in relation to HIV infection is especially intensive and difficult. The counselors must regularly face their own mortality, deal with loss, offer support to people in extremely distressing circumstances, and sometimes accept behaviour of which they personally disapprove. Without feeling committed, the counselor will not be able to provide the necessary support.

Counselors can also suffer stress from work overload, lack of or inadequate expertise, and lack of support and appreciation of their work. The counselor can very easily get overwhelmed by all the challenging work involved in working with people living with HIV/AIDS. For this reason, it is important that counselors take care of themselves as well. Counselors can get support from senior and more experienced counselor colleagues or supervisors or by sharing with other counselors. This form of supervision should provide the counselor with an opportunity to share difficult client work, in a confidential way, as well as get help with personal problems or issues that may become barriers to the counselor's work with clients. The support should be ongoing and regular as long as the counselor is doing client work. Counselors should have enough rest and relaxation, and sleep and eat well.

Staff stress in clinical settings

Having to work with HIV/AIDS people can have considerable adverse impact on the morale and the efficiency of the health care staff.



Ask the participants to brainstorm on the sources of stress, reactions to stress and coping with stress. Use the information below to fill in the gaps.

Sources of stress

Unanticipated or stressful tasks

- Talking to patients about life-threatening illnesses.
- Taking a sex history.
- Caring for a large number of acutely ill people whose condition may lead to death.
- Having to help young people face disfigurement, disability and death.
- Having to give information that is incomplete or that may later prove to be incorrect because of the rapidly increasing knowledge about AIDS and HIV.
- Not being able to reassure patients about their condition.
- Having inadequate or insufficient skills for counseling patients, their relatives and friends.

Management and organizational difficulties

- Pressure at work from insufficient and inadequate resources, such as counseling rooms, telephones and secretarial help.
- Not being consulted by managers when policy decisions are being made.
- Unclear or poorly defined work boundaries between members of staff.
- Pressure at work to do either more research or more clinical work.
- Pressure at work to give lectures and seminars.
- Lack of suitable supervisors or people with whom one can discuss issues in this rapidly growing field.

Personal and home issues that intrude into the work situation

- Anxiety about being infected with HIV by patients in the clinical setting.
- Anxiety of the spouse, lover or close friends of the professional about being infected and the social stigma that is associated with AIDS.
- Over-identification of health care staff with patient—many professionals are themselves young, sexually active and at some personal risk of being infected with HIV.
- Difficulty in achieving a balance between time spent at home and at work.

Typical reactions to stress

Physiological signs

- ⇒ eyestrain or sore eyes
- ⇒ trouble sleeping or insomnia
- ⇒ muscle strain or pain in neck, back, arms, shoulders
- ⇒ stomach pains or digestive problems
- ⇒ nausea or dizziness
- ⇒ tightness or pressure in the chest
- ⇒ headaches
- ⇒ indigestion and diarrhoea
- ⇒ impotence or reduced sex drive

Emotional signs

- ⇒ depression
- ⇒ periods of irritability or anger
- ⇒ feelings of failure, inability to cope, irrational dread of future events
- ⇒ problems of concentration, daydreaming
- ⇒ loss of sense of humour and interest in life
- ⇒ belief that one is not liked or cared for
- ⇒ feeling of isolation exhibited by withdrawal and problems in communication
- ⇒ swings in mood
- ⇒ worry about physical health
- ⇒ feeling of tiredness

Behavioural signs

- ⇒ less care about personal appearance
- ⇒ forgetfulness, clumsiness
- ⇒ increase in periods of inactivity while at work
- ⇒ difficulty or unusual slowness in decision-making

- ⇒ more time taken from work, for example, longer lunch breaks
- ⇒ accident proneness including car accidents
- ⇒ increased intake of alcohol or use of other drugs
- ⇒ over- or undereating
- ⇒ declining job performance
- ⇒ increased absence from work
- ⇒ less time and energy for family, friends and social activities

What can we do about stress?

Change the situation

- ⇒ add resources
- ⇒ lighten the task

Improve ability to cope

- ⇒ undergo training
- ⇒ get supervision and appraisal

Accept the unsolvable

- ⇒ avoid the situation
- ⇒ let go

Change the way we think—attitudes and responses by avoiding

- ⇒ indulging in negative self-talk
- ⇒ making everything a catastrophe
- ⇒ using demand words
- ⇒ labelling
- ⇒ blaming upwards or outwards
- ⇒ expecting imperfections

Maintain a positive lifestyle by having more relaxation and making allowances.

Know your own triggers.

Have clear goals and boundaries, know your role and others' roles, and take short breaks or pauses to review each task done.

Ensure that you have high support and high challenge in your workplace.

Have access to a counselor in your workplace with whom to share your personal concerns.

It is important to remember that stress can be a motivator for growth, development and adaptation; it is a challenge, it adds variety, and it can be the spice of life.

How to manage stress in a clinical setting

It helps to organize regular meetings for all staff members at all levels to give them the chance to express their concerns.

Consider the following:

- Composition of group—all medical consultants or a mixture of professionals and others in the team or unit?
- Frequency of the meetings—monthly or every 3 months?
- Leadership of the group—have different facilitators from within the unit or outside facilitators or head of the unit?
- Purpose of the group—for discussing practical matters or also for raising personal issues?
- Setting of guidelines—and sticking by them.
- Involvement of head of unit—a necessary feature.
- High support and high challenge—no blaming.
- Respect for everyone's opinion.

The meeting should provide an opportunity for staff members to share their own grief with the survivors of the patient, staff counselor or someone from outside the clinical setting, especially when overwhelmed by the death of a dear patient.



Summary

4-6-1

In this module, we have learned that being aware of one's values and prejudices is essential before one can help others. Counseling and counseling skills have been reviewed and their application to HIV has been explored. The three-stage model of counseling consists of Exploration, Understanding and Action, but clients may be at different stages, and it is the role of the counselor to move them along according to their needs.

Voluntary counseling and testing consists of pre- and post-test counseling as well as ongoing counseling. It is an important component of interventions to reduce mother-to-child transmission of HIV, as it allows the mother to learn her HIV status and make appropriate decisions about use of antiretroviral drugs and about the options she has for feeding her baby.

Counseling in MTCT should include couple counseling and safer sex counseling.

Summary

- ◆ Self-awareness is important for counselors
- ◆ Counseling helps clients cope with HIV worries
- ◆ The three-stage model of counseling is exploration, understanding and action
- ◆ VCT is vital for reduction of MTCT
- ◆ MTCT counseling should include couple and safer-sex counseling

4-6-1

PMCT TRAINING CURRICULUM



Module 5

ADVOCACY AND COMMUNITY MOBILIZATION FOR MTCT INTERVENTION

prepared by

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Module 5

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Advocacy and community mobilization for MTCT intervention

Use the 'Community mobilization' set of transparencies to present the information for this session. Use the transparency at the point indicated in the text with a flag , title and number.

Introduction

Definition of community mobilization

Introducing a new idea or product is a challenging task for industries all over the world. Companies invest large amounts of money to ensure that their product hits the market and is purchased to recover both production and marketing cost before they can even think of a profit. In the health arena, new diseases and challenges hit society all the time. Scientists and health care providers are expected to inform communities of the new problems and the solutions and ensure that these are adopted to reduce loss of lives. Unlike in industry, where the purchaser can see immediate benefits, health professionals have to convince communities that a problem exists and ensure that the community adopts preventive and curative practices. Examples are many where resistance to clear solutions such as vaccination have resulted in avoidable deaths of children.

The most challenging epidemic in recent years is HIV/AIDS. In sub-Saharan Africa, which has 75% of the victims, communities and people have found it difficult to change traditional sexual practices or to use products such as condoms to practise safe sex. Because of the slow rate of change in behaviour, the prevalence of HIV in the adult population has risen to unmanageable levels and hence contributed to the rising rate of mother-to-child transmission of HIV. Concurrent with the advocacy and mobilization to reduce HIV transmission in the adult population must be a commensurate or even higher level of discussion on the spread of HIV from mothers to their children.

This module provides advocacy tools to use at all levels of society. It provides information on how to mobilize communities to use voluntary counseling and testing services and to ensure that pregnant mothers use the services provided

for preventing mother-to-child transmission of HIV. It is assumed that through advocacy and community mobilization, individuals will also adopt behaviour that reduces HIV transmission in the general population.



5-1-1

Module topics

🎯 Objectives

This module will enable participants to

- ⇒ explain the problem of mother-to-child transmission of HIV in the community and its related issues
- ⇒ understand the gender, economic and sociocultural factors that influence community response
- ⇒ describe how the community is coping with problems such as stress, stigma, confidentiality and family dynamics
- ⇒ identify the key decision-makers and influential individuals in the community
- ⇒ communicate effectively with all concerned in the community
- ⇒ recognize the roles of other sectors and individuals working in the area of HIV/AIDS
- ⇒ collaborate with other organizations and persons to reduce mother-to-child transmission of HIV

The four units of this module are designed to enable the participant to work effectively with the community. The first unit defines what a community is and what is community mobilization. It identifies the indicators one would use to determine if a community is mobilized. The unit also describes approaches used to engage communities in dialogue and enlist interest and concern and to ensure participation in seeking their own interventions. In simple terms, it tells how to enter the community and introduce the HIV/AIDS situation. It assists a community to identify its MTCT risk and seek solutions.

The second unit deals with the process of influencing the community through advocacy, effective communication and adult education to adopt new and positive practices. The third unit explores ways of networking and fund raising.

The final unit explores the psychosocial issues related to MTCT and suggests ways of working with the community in this respect.

Different adult learning methods are used in this module, among them, brainstorming sessions using visualization in participatory planning (VIPP), simulation exercises with discussion, mini lectures, debate and exercises.

Unit 1

Understanding the community

prepared by
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Understanding the community



Duration: 2 hours



5-1-2



Objectives

At the end of this unit the participants should be able to

- ⇒ define ‘community’ and describe characteristics of different communities
- ⇒ describe approaches they would use to establish dialogue with communities
- ⇒ describe the processes they would use to assess the MTCT risk in different communities



5-1-3

Community defined



The term ‘community’ can mean different things to different people. It is necessary to clarify the meaning of the term before carrying out community mobilization. In this module the participants will define the term community and the facilitator will summarize after discussion.



Exercise 1: Place participants in groups of four. Have them list the different types of communities that they can think of and describe the characteristics of each. You can use visualization in participatory planning cards of different colours for this unit. Table 5.1.1 is an example of a typical result.

Table 5.1.1**Types of community and their characteristics**

Type of community	Characteristics of the community
Village	<ul style="list-style-type: none"> • Made up of a group of people • Share an administrative structure • Share resources • May share traditions, culture and norms
Student community	<ul style="list-style-type: none"> • Made up of people with similar interests • May be in the same age category • Share resources • Share an administrative structure
Community of nurses	<ul style="list-style-type: none"> • Made up of people with a common purpose • Share norms and vision • Bound by the same ethic



Use the lists the groups have drawn up to define the term ‘community’. Some of the issues that come out should include people with shared resources, a common interest, shared goals, or shared traditions and culture.



5-1-4

Types of community

Communities can be defined by their geographical location (territorially), their social interaction or their social organization. Therefore, a community can be defined as

⇒ a territorial unit of society

⇒ a unit of social organization

⇒ a type of social interaction

Table 5.1.2

Examples of different types of communities

Type of community	Definition or elaboration
Territorial	Village, town, city, estate, other geographical unit
Organizational	Based on shared living situation or interests such as school, home, hospital
Interactional	Typically characterized by <ul style="list-style-type: none"> • a sense of belonging • a sense of common purpose or goals • a high degree of cooperation in pursuing common goals • an interpersonal climate of mutual trust, respect and fraternity

Different factors make communities remain cohesive and work towards a common goal. The traditions, norms and administrative mechanism of territorial communities maintain their harmony and respect. Rules and regulations of organizational units govern coexistence within them. A sense of belonging and trust binds interactional communities. Communities that are united are easier to work with and more likely to adopt the behaviour you wish to promote. In the following exercises, participants will explore factors of unity in a community and factors that cause conflict and division. Have them describe ways in which they have been able to deal with conflict and division in their communities.



Exercise 2. What brings about unity, conflict or division in a community?

Using a flip chart, have participants list the three most important things that seem to divide or cause conflict in their community, and then list the three most important things that seem to unite communities. Take a few minutes to allow participants to give their personal experience in resolving conflicts.



Exercise 3. Play the Power Walk, a role-play game.

Communities are made up of people with different characteristics and different backgrounds. Their varied experiences cause them to make different choices when confronted with same problem. The Power Walk

exercise demonstrates the real power dynamics in a community and the factors on which community members make their decisions. Participants bring their own experiences and cultural background to the exercise in deciding whether to take a step.

How to play the Power Walk: Use a walkway about 30 metres long. Ask for nine volunteers, each of whom takes on the assigned role of a community character. All start the walk from the same point, as in a race. Players identify themselves with the circumstances that their characters would have and assume a commensurate amount of power. The decision each player makes is whether they would say yes when a question in the following list is asked. If so, they take a step forward. Volunteers do not reveal to the rest of the group whose role they are playing until the end of the game.

At the end of the walk, help participants identify what power, or lack of it, is behind each decision made. Issues that come out should include age, gender, education, culture, and economic and political traditions.

Have the volunteers line up at the start of the walkway and give each a slip of paper naming the community member whose character they will assume.

Characters

1. A 30-year-old single mother of five children who makes her living selling vegetables and supplements her income by giving favours to men
2. A man, age 19, school drop-out, married with one child, who works a loader for a truck and is sometimes a casual labourer
3. A married woman, 30 years old, wife of a peasant farmer, who has three children and helps her husband on their 5-acre farm
4. A married man, a peasant farmer, with three children, who owns a 5-acre piece of land on which he has some coffee and a cow
5. The local chief, who is a large land owner
6. The chief's wife, who runs a small shop at the local market
7. A local politician in the ruling party
8. The district medical officer, who is a woman
9. The medical health worker, who is a man

Each question is read out clearly and participants are allowed time to make decisions. Those who can answer 'yes' to a question take one step forward while

those who cannot answer yes remain in the same position. At the end of the exercise, some community members will be ahead and others will still be at the starting line.

1. Would you be able to read and understand a newspaper in which issues of HIV are presented?
2. Would you afford necessary but expensive medical treatment abroad or at the national referral hospital?
3. Would your children never have to sleep hungry?
4. Would you have an adequate amount of safe drinking water in your home?
5. Would you always have enough fuel in your home?
6. Would you be consulted in siting a new health centre in your village?
7. Would you afford adequate amounts of infant formula if your child could not breastfeed?
8. Would you visit a local bar where community issues are discussed and sometimes informally decided?
9. Would you be consulted regarding religious-related decisions in your community?
10. Would you never have to queue at the local health centre?
11. Would you be able to educate your children through university?
12. Would all your children most likely be born in a hospital?
13. Would you be able to afford a lawyer to defend you in court?



As a group, then discuss why the different characters move at different rates of speed—10 minutes.

Summary

A large proportion (53%) of the Kenyan population lives below poverty line. Women are the majority among the poor and have little power traditionally and culturally to make decisions. For this reason the largest number of those in the Power Walk, including most of the women, are left close to the starting line. Only a few men, with resources, education, political clout and supported by culture and traditions, take a step on every count.

Community mobilization

Method of teaching: mini-lecture covering

- ⇒ definition
- ⇒ indicators
- ⇒ assumptions of community mobilization
- ⇒ why community mobilization is important



Definition

Community mobilization is the process of supporting members of a community to clarify and address their problems, needs and aspirations collectively. The people themselves understand the problem and its cause and are involved in articulating and responding to their own problems with the support of experts. Community mobilization encourages participation and empowerment. Through this process, community members and their resources come together to achieve a common goal.

In the course of the training, you will realize that community mobilization is an integral part of a good health care system and is an important component that ensures success of a programme. Health workers need to have a clear understanding of the influence that the community and key community persons have in using health services and also to recognize community role in providing services.

With increasing understanding of the complexities of HIV transmission, prevention, control, management and care, it has become necessary to ensure that community advocacy and community mobilization are an integral part of interventions. In preventing mother-to-child transmission, it is even more urgent that health workers be well trained to guide community involvement in the complex issues surrounding HIV and MTCT.

According to the UNAIDS Technical Update of 1997, a community mobilized for HIV/AIDS is typically one in which

- ⇒ members are aware, in a detailed and realistic manner, of their individual and collective vulnerability to HIV/AIDS, and of the risk of MTCT of HIV/AIDS

- ⇒ members are motivated to do something about this vulnerability and risk
- ⇒ members have practical knowledge of the different options they can take to reduce their vulnerability and risk
- ⇒ members take action within their capability, applying their own strength and investing their own resources, including money, labour, materials or whatever else they have to contribute
- ⇒ members participate in deciding what action to take, evaluate the results, and take responsibility for both successes and failures
- ⇒ members seek outside assistance and cooperation when needed

Indicators of a community that is mobilized

Using the definitions above, we can measure how mobilized a community is for a particular issue—in this case, for preventing and controlling HIV/AIDS.

Key indicators:

- *Knowledge level*—the majority or all members are aware, in detail and in a realistic way, of their individual and collective vulnerability to HIV/AIDS and the risk of mother-to-child transmission of HIV. They have practical knowledge of the different options they can take to reduce their vulnerability or risk.
- *Motivation to intervene*—members take action within their capacity, applying their own strengths and investing their own resources, including labour, money, materials, time and whatever else they can contribute.
- *Empowerment level*—members participate in decision-making on what action to take, evaluate their results and take responsibility for failure. The community seeks outside assistance and cooperation when it is needed.



Assumptions are that communities . . .

5-1-5

The following important assumptions are made in mobilizing communities.

Communities have knowledge, which can be tapped and used in assessment analysis and in taking appropriate actions. A large number of members with different experiences and traditional knowledge as well as a large number of retired experts contribute to this knowledge. Without this assumption, experts tend to teach instead of learning from the community.

Communities are capable of making appropriate decisions given the right information, such as a community of Samburu practising tetanus control. Appropriate information on tetanus transmission was provided to traditional birth attendants in Wamba. They went on to identify their rituals for cutting the umbilical cord on the underside of the father's sandal for a boy and the underside of the mother's sandal for a girl as being a source of tetanus, but they would not change their practice. However, when they were asked to look for a possible way of avoiding tetanus, they decided that since the woman is the one who makes sandals from skin, when she becomes pregnant she should make two pairs to be set aside for use after the birth of the child—one for her husband and one for herself. They agreed to educate mothers to place the cord on a new instead of an old sandal when it was cut to avoid tetanus. This decision of theirs did not interfere with their rituals around cutting the cord. (Expert solutions included boiling the sandal and cleaning it with antiseptic.)

Communities have a right to expression and to question information and ideas. Health workers must speak in a language that is understood, simplify the terms they use, and demystify the subjects they talk about.

Communities have resources—human, materials and financial. Communities will invest their resources only when they are convinced of the benefits of the investment. Communities can sustain interventions that they deem beneficial to them.

With HIV/AIDS, a community must be taken through a process of assessing the situation and factors contributing to rapid increase, and it must participate in identifying solutions, planning and implementing interventions, and monitoring the response.

Why is community mobilization important?

Community mobilization is important since it leads to greater understanding of the problems, and solutions that are identified are relevant and sensitive to community culture and traditions. Participatory MTCT should lead to better use of the services. Advantages:

- Appropriate community mobilization values the members of the community and their right to self-determination, and it recognizes their indigenous resources.
- Appropriate community mobilization enables a community to identify and solve its own problems. In this way the people's culture and religion are

respected and made to act as a positive resource rather than a barrier to the required change.

- As a community is mobilized, the public health programme gains understanding of a community's patterns of belief and organization, and the programme links interventions to existing structures.
- In mobilizing a community, health workers learn to listen to community ideas and understand how the community interprets information.
- Health workers adopt a language of communication that is understood and accepted.
- Health workers demystify health issues, and community members and experts work hand in hand to seek solutions to the problems.
- The public health system and the community identify the problem together, define the causality, seek solutions and share resources available.

However, there may be different schools of thought regarding the need to take so much time to mobilize communities regarding a health issue that is at epidemic level. These opinions can be debated.



Exercise 4. The great debate for and against community mobilization.

Divide participants into two groups to prepare for debate on the importance of community mobilization in health care delivery, one group for the issue that community mobilization is important for health care delivery and one group against it. Allow 10 minutes for the groups to prepare. Identify two to proposers and two opposers. Give each presenter 5 minutes (20 min). One proposer presents, then one opposer, then the second proposer followed by the final opposer. The entire group then discusses the results for 5 minutes. There are no winners in this debate. (35 min).



Exercise 5. This exercise explores reasons why communities appear resistant to participation.

Reasons for resistance include the methods that health workers use, their attitudes and perceptions, and similarly the communities' attitudes, perceptions and readiness. Distribute cards to everyone in the group. Have half the group write answers to the question, 'What makes a community participate effectively?' and the other half, 'What makes a community resistant to participation?' Put responses on a flip chart and discuss for 10 minutes, identifying the community reasons and health workers' contributions.

How to enter a community and initiate dialogue on preventing MTCT



Duration: 2 hours

Methods of facilitation

- Mini-lecture and discussion (45 minutes)
- Role-play on entering different communities (75 minutes)

Introductory mini-lecture

We have defined a community and agreed that the community should be involved and participate in the whole programme cycle. The next step for you as the health worker is to find the best way to introduce yourself and the issue at hand to the selected community. The community presently chosen is a territorial unit such as a district and its divisions.

To enter the community, you as a health worker should

- ⇒ familiarize yourself with the community where you are going to work; know its characteristics such as population size, language, traditions and culture, socio-economic characteristics and prevalence of various diseases
- ⇒ have a clear understanding of the sociocultural and religious issues and adopt a sensitive and respectful attitude
- ⇒ use communication strategies and styles appropriate for the age, sex and status of the people with whom you make contact
- ⇒ use existing community structures such as the administrative and social structures, community-based organizations and religious organizations

When entering a community it is important to give honest information on the objectives and the mission at hand and to facilitate community members in discussions and participatory research to identify their problems and assess their needs. It is always important to be aware that the community may express different problems and needs from those perceived by the health worker. The health worker therefore needs to know of networks that the community could use to seek assistance beyond the capacity of the health system.

- Identify and develop links with existing organizations within the community whose activities are similar.

- Encourage members of the community to strengthen existing community organizations or form new ones if they do not exist to support and sustain their activity.



Ultimate goal of community intervention

5-1-6

The ultimate goal in entering a community is to ensure that the community participates in identifying its health problems, their causality and possible solutions. The next step is to identify the necessary resources and determine which are available in their community and which they need to solicit externally. The community members are then able to develop appropriate interventions based on available resources.



Mobilization role of the community health worker

5-1-7

The community health worker

5-1-8

Community health workers are frontline community mobilization agents. They already have considerable experience. They are aware, probably more than anyone else, of the need to update skills and learn from the experience of other community workers in different or similar contexts.

If community health workers are to be effective in mobilizing a community, they need to pay attention to the following:

THE CONCEPT

The understanding of community should be the same for the health worker and the community members. When the health worker talks of this community, all its members should feel included. The purpose and mission of the mobilization should be spelled out clearly, honestly and consistently to avoid confusion.

COLLECTIVE ACTION

Health workers should recognize the importance of collective action in the community and apply democratic principles in community decision-making. Making community members aware of the problem should help develop common goals.

PARTICIPATION	Community members should not feel as if forced or coerced into the undertaking; rather, they should be helped appropriately. Enough time should be provided for discussion, consultation and consensus building.
EXTERNAL EXPECTATIONS	Communities may tend to become dependent on external resources and ideas. This should not be encouraged or allowed. Clear and consistent information including mission objective should be repeatedly given.
FLEXIBILITY	The community should be allowed some flexibility. Plans should be reviewed regularly, with input from the community shaping the patterns as far as possible.

Health workers are usually trained to give instructions to their patients. But they have counseling and care skills as well, which come in handy as they undertake advocacy and community mobilization. In the role-play in this exercise, health workers use their skills with different community groups to introduce the issues of HIV/AIDS



Exercise 6. Role-play to identify participant's skills in entering the community. Organize the participants into four different community groups. Allow them 5 minutes to plan how they will behave when the health worker approaches them: 1) a group of villagers, 2) a women's religious group, 3) a group of young adult males who work as sugarcane cutters, 4) a group of adolescent girls at a choir meeting. As one community at a time organizes itself in front of the class, a volunteer attempts to establish dialogue and introduce a discussion of HIV/AIDS. Allow 10 minutes for each group, followed by 5 minutes of discussion on what the health worker did correctly and what was not correct.



Module topics

- ◆ Understanding the community
- ◆ Advocacy and communication
- ◆ Partnerships in community mobilization
- ◆ Psychosocial issues related to MTCT and the community

5-1-1

Objectives

- ◆ Help communities understand and cope with the problem of mother-to-child transmission of HIV
- ◆ Understand some of the sociocultural factors that influence community response

5-1-2

Community defined

A community can be defined as—

- ◆ A *territorial unit* of society
- ◆ A unit of *social organization*
- ◆ A type of *social interaction*

5-1-3

Types of community

- ◆ Territorial village, town, city, state
- ◆ Organizational based on shared living situations such as school, home, hospital
- ◆ Interactional characterized by—
 - sense of belonging
 - sense of common purpose or goals
 - high degree of cooperation in pursuing common goals
 - interpersonal climate of mutual trust, respect, fraternity

5-1-4

Assumptions are that communities—

- ◆ have knowledge
- ◆ can make good decisions
- ◆ have a right to express their ideas and to question ideas
- ◆ have resources, including financial, that they can use in their own interventions
- ◆ can sustain interventions that they deem beneficial

5-1-5

Ultimate goal of community intervention

The ultimate goal in entering a community is to ensure that the community participates in identifying and assessing its problems and needs, that it can identify the cause or associated factors, and that it can develop appropriate interventions based on its available resources.

5-1-6

Mobilization role of the community health worker

- ◆ *Concept*—The frontline community health worker needs a clear concept of ‘community’ and of what it means to the particular community itself.
- ◆ *Collective action*—The worker must strive for democratic participation of all community members and ensure that they appreciate common goals.

5-1-7

Mobilization role (contd)

- ◆ *Participation*—The community should not feel coerced into decisions.
- ◆ *External expectations*—The community should not become dependent on outside resources or thinking.
- ◆ *Flexibility*—Plans should be flexible and take in community ideas as much as possible.

5-1-8

Mobilization issues to discuss

- ◆ HIV/AIDS in the community
- ◆ Mother-to-child transmission of HIV
- ◆ Opportunities available for intervention
- ◆ Assistance to communities in developing a plan for intervention

5-1-9

Unit 2

Advocacy and communication

prepared by
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Advocacy and communication

Objectives



5-2-1



At the end of this unit, participants should be able to

- ⇒ prepare a community-based advocacy plan
- ⇒ describe the characteristics of a community-based social plan
- ⇒ describe its components and process

Methods of facilitation



Lecture (45 min)

Exercise (75 min)



5-2-2

Why advocacy?

Understanding advocacy

The issues of HIV and specifically those related to mother-to-child transmission of HIV require allies in advocacy and communication of correct information.

What is advocacy and why is it important to develop a community advocacy plan? The Collins English language thesaurus gives the word the following synonyms: argument for, campaigning for, championing, defence, encouragement, justification, backing, advancement, pleading for, promotion, support.

Advocacy defined broadly is a continuous and adaptive process of gathering, organizing and formulating information into argument, to be communicated through various interpersonal and media channels, with a view to raising resources or gaining political and social leadership acceptance and commitment for a development programme, thereby preparing a society for its acceptance.

Advocacy is important in interventions aimed at preventing HIV/AIDS transmission and specifically in preventing mother-to-child transmission. From

various Kenyan studies, it is evident that knowledge about the disease AIDS and the modes of transmission is high—95 to 99%—yet there has not been a commensurate change in behaviour. One can assume that communities have not been properly mobilized and the process of advocacy has been wanting. It is particularly important that communities be well informed to the point of accepting to commit their own resources in preventing mother-to-child transmission.

It is important that the community participates in gathering relevant HIV/AIDS information, in understanding and using it and communicating with others, and in soliciting resources and developing interventions.

The first step in advocacy in the community is to provide adequate evidence-based information, appropriately packaged and easy to understand.

An example drawn from nutrition is presenting information on stunting in childhood by comparing it to maize growing on a farm. Some plants are green, tall and healthy (growing in soil with adequate nutrients), and some are short, yellowish and weak (growing in soil without enough nutrients). Community members discuss the outcome of such maize—the weak plants will be short and less productive. Even if manure is added, the weak plants will never catch up and they will produce less. What happens to children in the same circumstances? They end up short and their brain development may be affected so that their intelligence is low.

Community members understand data on malnutrition prevalence better when the facilitator points out that research shows that one in every three children in such a community is stunted.

The next step should be for the community to collect data so that members can verify for themselves if the research finding applies to their community. Based on this data, they can also analyse the factors leading to the rise of the problems, identify solutions and develop a plan for advocacy and intervention.

Some of the various approaches that have been used in the community to invoke participation in assessing, analysing and developing action plans are given here.

Participatory rural appraisal techniques

Community workers in agriculture have developed skills in involving communities in a method known as participatory rural appraisal (PRA). Health

workers are now using this method. Community members participate, using their knowledge and skills in assessing and analysing the community problem and in developing a plan of action including identifying their own and external resources.

The tools of PRA include

a community resource map

Community members with the help of an expert draw on the ground a map of their village and indicate on it the resources available to them. These may include schools, water resources, churches, professional persons, factories. On this map they can chart out the areas of concentration of people dying from a particular illness and attempt to analyse why.

transect lines

Community members walk through their village on various transect lines and describe the soils, the housing, the children and other findings along any particular line. They interview other members on the way to clarify issues. When applied to the resource map, the transect line enhances discussion about the village and helps to identify causality of events.

a seasonal calendar

Community members plot on the ground the months of the year and indicate the seasons of rainfall, the periods of high labour and low labour demand, the periods of illness, births and deaths, and any other issues they wish. This helps them to relate the occurrence of disease to seasons and availability of resources such as money.

a time line and a trend line

These lines use knowledge of the community of those who have lived long in it. Older members of the community are able to recount events that occurred up to 100 years ago, such as the onset of a disease epidemic, droughts, wars and other calamities. They can develop trends for various factors such as size of land holdings, population, illnesses and education.

institutional analysis

Using simple drawings or discussion, community members identify the institutions in their community and the roles they play. They identify how the various institutions could be made more effective in serving them. During the institutional analysis it is important that the various institutions in the

community are represented so that they can provide information on what they do and they can also get to know what communities think of them.

priority setting

When community members have identified the problems and their solutions, they cannot tackle all the problems at once. They then are encouraged to vote to set priorities. Different methods can be used to set the priorities, and community members can choose how they want to go about it.

elaboration of a community action plan

Once the priorities have been set, the community members develop an action plan that includes the problem, the activities to be undertaken, by whom, when, what resources they have and their source.

These PRA tools are enhanced by other tools that are used in quantitative research and gender analysis.



Tools for qualitative and quantitative research

5-2-3

The most used tools include

focus group discussions

These are organized for different age and gender groups in the community to discuss an issue using a simple set of guiding questions. The group should be made up of 8 to 12 members. A moderator, who could be one of the group members, guides so that all contribute to the discussions. Their discussions are documented and presented to enhance the findings of the PRA.

key informant interviews

Knowledgeable individual members of the community can be interviewed by other members using simple guidelines to explore issues that need in-depth understanding. An example could be the sociocultural issues associated with HIV/AIDS.

24-hour day for men and women (a gender analysis tool)

A recall of activities that men, women and children carry out from morning through the day and the night to the next morning, this technique assists communities identify the roles that various members in their village play. It helps them programme interventions considering the time the members have available, and it helps identify who may already be under work stress.

Quantitative information sources

In every district, data exist that a community could use to set up indicators for evaluating impact and monitoring response to interventions. These sources include

- ⇒ census data
- ⇒ baseline surveys
- ⇒ disease surveillance data
- ⇒ facility-based records (such as hospital records)

All the processes described above help the community understand itself better, value the skills of its various members, and own the successes and failures of interventions they put in place.

Preparing a community-based social mobilization plan

Social mobilization is the process of bringing together all feasible and practical intersectoral social partners and allies to determine what needs are felt and to raise awareness of or demand for a particular development objective. It involves enlisting the support of institutions, organized groups and communities in identifying, raising and managing human and materials resources, thereby increasing and strengthening participation for self-reliance and sustainability of achievement.

The facilitators of social mobilization need to understand advocacy as the process of assembling and deploying argument to support a cause. This may be done directly, face to face (such as with decision-makers) or through efforts involving various degrees of complexity and levels of sophistication such as mass media or other channels of communication and mixture of media. Advocacy needs to take into account its audience and envisage how it may affect its audience.

Community social mobilizers begin their task with social planning. The process involves setting out to modify the amount, quality, accessibility and range of services that a community provides for its members.



Social planning for advocacy

5-2-4

Effective planning involves

- ⇒ assessing the community needs in the area of concern
- ⇒ setting priorities
- ⇒ identifying available resources
- ⇒ developing a plan of action to meet the identified needs

The function of social planning is

- ⇒ to solve problems identified in the community
- ⇒ to put in place the services that will improve the quality of life in the community in relation to the central problem

The community planning we are dealing with here is concerned with helping community members become aware of the threat of mother-to-child transmission of HIV/AIDS in their own community and of the best ways to minimize this threat.



Community-based social planning

5-2-5

Social planning is likely to be more effective when community members are involved in it in a genuine and serious way, rather than if the community receives ready-made plans from the government or some outside agency. Community-based planning is likely to be effective for a number of reasons:

- The goals of the programme represent the actual perception of the community.
- The community can provide many committed people to work on a problem that affects them directly.
- Planners are sensitive to the needs of the community.
- New ideas and new leaders readily emerge from the community.
- Resources can be planned economically.
- The community gains expertise that can be employed in other similar areas.

Characteristics of community-based social planning

The distinguishing feature of community-based social planning is that the agency workers or experts and community members work in democratic teams to carry out the planning and make all the important decisions jointly. This kind of social planning has many advantages:

- The experts and members of the community are active in planning and evaluating the programme.
- All the agencies interested in the same problem work in a network.
- The community has its own organized structure through which the planning and evaluation work is carried out.
- The community organization has the means to react to specific issues in time in a routine way.
- Traditional planning agencies such as government departments are involved in the planning and evaluation as partners without the community feeling patronized or dominated.
- The exchange of information among all the agencies involved and with the community is open and continuing.
- Both the local and the universal rights of the community are protected.

However, community-based social planning has its disadvantages as well:

- It is slow, taking the time of both the experts and the community.
- Communities may identify problems and set priorities that are not related to the issue at hand.
- Without proper monitoring, communities may fail to obtain updated information.



The task is to develop a public information campaign on prevention of mother-to-child transmission of HIV/AIDS in a village in western Kenya. Have the participants work in groups of three for 30 minutes to develop a community-based advocacy plan. Two members of the group act as the agency experts and the third represents the community. Each group is to produce a write-up on newsprint to display at the plenary. The visual will contain

- ⇒ a situation analysis based on existing data
- ⇒ an assessment of the community's information needs
- ⇒ the order of priorities
- ⇒ a list of resources that are available in the community's resources
- ⇒ a plan of action (activity and who, when and what internal and external resources are needed)

The participants then come together in plenary and present their plans (15 minutes per group). Questions and comments follow when all the presentations have been made. Display the plans on the wall.



5-2-6

Effective communication

Methods of facilitation



Lecture on communication—20 minutes

Exercise—15 minutes

Lecture on adult learning methods—25 min



Definition of effective communication

Communication is the mutual exchange of information and understanding by any effective means. It can also be defined as a horizontal process characterized by interaction. This includes exchange of ideas, information, points of view, experiences between persons and groups. In the two-way process, the receiver is also a transmitter or giver. In other words, in an ideal situation of communication, passiveness is non-existent. The two points of contact are essential in the process.¹

Current thinking suggests that communication can best be defined as dialogue and interactions related to behavioural change to understand one other better, give and share new ideas, transfer information and learning. This is different from telecommunication, which is a purely technical concept in which information is vertical and non-interactive and the receiver is passive.

Communication involves two or more people. If the flow of information is one way, communication does not really take place. Effective communication depends on systematic planning and practice. Communication enables us to share facts, feelings, ideas and attitudes.

¹ Adapted from Robert Savio, 'Communication for development', *Development* 1990:7-8.



5-2-7

The 4 elements of communication

Communication always contains four elements

SENDER	The person who generates the communication.
MESSAGE	The message itself. The message as seen and intended by the sender may be different from the message as seen and understood by the receiver.
MEDIUM	The channel through which the message is passed. Some media are more effective with certain types of communication than others.
RECEIVER	The person who receives the message. The person may or may not be the intended receiver.

Body language is an important part of communication. Body language is any message that is sent through tone of voice, facial expression, body posture, and so on. Effective communication uses a combination of verbal language, non-verbal language and body language.

Goals of communication









Communication must have a purpose. Consider the following:

- ⇒ to convey information
- ⇒ to assure understanding
- ⇒ to get action
- ⇒ to persuade
- ⇒ to identify mutually acceptable approaches towards solving identified problems

Through communication we express our needs, feelings, ideas. We give and receive information. In this way we establish ourselves as individuals, each with our own identity. Being able to communicate gives us a way of controlling what happens to us. Being able to communicate effectively is an important step towards building relationships and being involved in a community.

Chain of communication

Communication is a process. It links elements in a sort of chain.

- 1  Sender initiates The sender may be guided by the following questions to ensure that the message gets through.
 - WHO is the person I am talking to?
 - WHAT am I trying to say?
 - WHY do I want to pass this message?
 - WHEN should I pass the message?
 - HOW should I pass this message?
- 2  Message The sender needs to put the message into words, symbols and sounds that give the receiver the meaning that the sender intended.
- 3  Information The receiver needs to receive facts instead of opinions to guarantee the accuracy of the communication.
- 4  Language The sender should use language that is easy to understand.
- 5  Meaning of words The sender needs to be conscious of the semantics to ensure that the receiver does not interpret differently the words used.
- 6  Medium The sender should select the medium that is the most effective in the prevailing circumstances. It is helpful to use a mix of media for reinforcement.
- 7  Receiver The receiver's needs, likes, dislikes and preferences will influence the effectiveness of the message.
- 8  Experience and background The communication should be in tune with the nature of the audience so that it is neither too sophisticated nor patronizing.



Feedback

Feedback works to answer the question: Did the recipient understand the communication? Feedback ensures that the chain is functioning in order. It occurs along the whole length of the communication chain but especially at the end.

Exercises in communication

The bus ride and the telephone message

The bus ride

Narrate the following story, changing the bus stops to those on a familiar local route.

As the Akamba bus departing at 8 at night was about to take off for Mombasa from the Machakos bus stop, an 13-year-old boy boarded it. He was escorted by an elderly man, who bade him goodbye. Immediately the bus took off the boy called out to the conductor, saying, 'Please tell me when the bus gets to Mtito Andei'. The conductor did not nod and the bus moved on. At the Makutano bus stop the boy again shouted to the bus conductor, 'Please tell me when we get to Mtito Andei'. The bus conductor told the boy to sit down, they hadn't yet reached Mutito Andei. At Sultan Hamud, when the bus stopped to pick up more passengers, the boy was on his feet again asking the conductor to let him know when they got to Mtito Andei. The passengers were getting a bit weary of the boy's continuous shouting and so was the conductor. He shouted to the boy to keep quiet and the boy sat down again. The boy, however, reminded the conductor of his request when he reached Makindu and again at Kibwezi. Then he fell asleep, as did many other passengers. The bus moved fast and soon passed Mitito Andei. About 15 km beyond it, the bus conductor remembered the request from the sleeping boy. He went to the driver to ask him to turn back since it was night. The bus driver said, 'No! Do you not remember we have to meet our boss at Mariakani in one hour? And we are late.'

At this point pause and let the participants come up with their solutions before giving the outcome.

The conductor finally woke up the boy with fury, intending to rough him up, saying, 'Wake up quickly, we have passed Mtito Andei.' The boy woke up rubbing his eyes and said, 'It's okay. My father said I should eat my dinner at Mtutio Andei, otherwise I will be very hungry by the time I get to Mombasa.'



Discussion around this story should indicate the need to clarify the content of a message and the need for two-way communication. It is common for adults to assume they know what children are trying to communicate, but this is not always the case.

Incomplete information and lack of clarification can lead to serious consequences, hence the need to be careful about what we communicate and the likely reaction of the receiver.

The telephone conversation

A man arrived at his office from his house at 8 in the morning and quickly dialled the phone, intending to speak at his wife at home. A lady answered at the other end and the conversation went like this.

‘Hallo!’

‘Hallo!’

‘Is madam in the house?’

‘Yes she is.’

‘Where is she?’

‘She is in the bedroom with her boyfriend.’ The man breathed hard into the phone, deciding what to do. Then he asked the speaker at the other end, whom he assumed was their house-help, ‘Tell me, would you like to make a million shillings?’

‘Yes.’

‘Okay, go to the study, get my gun, go to the bedroom and shoot the two!’

The speaker said, ‘Okay,’ and left the phone off the hook as she walked to the study and then up the stairs. After a few minutes, he heard the sound of two shots and the woman finally came back to the phone. She said, ‘I have done what you asked, but what shall I do with the bodies?’


He replied, ‘Drag them down the stairs and throw them into the swimming pool.’

The woman at the other end replied, ‘But sir, we do not have a swimming pool.’

He asked, 'Is that 622184?'

The woman at the other end replied, 'No!'

He banged down the phone.

 A discussion should follow this presentation to emphasize the dangers of not collecting enough information before you make a decision and communicate it.

Adult education methods

Education is a planned series of events designed to enable learning and understanding. Adult education is any event that is designed to enable learning and understanding to take place in adulthood.

The significant distinguishing feature of adult education is the nature of adults as learners. Usually they are not a captive audience, compelled to subject themselves to the education process. Adults are generally more sceptical and more questioning of what they are taught than are younger people.

Another way of defining adult education is to use the term 'adult' to describe the content, the methods and the context as being adult in nature. In this session we shall be concerned with using teaching and learning methods that are suitable for adults and the learning of 'adult things'.

The adult learner



5-2-8



Four principles guide the education of adults

SELF-CONCEPT

Adults generally like to be perceived as being self-directed. If this self-perception appears challenged, the adult becomes defensive and tension is created. This may have the effect of reducing the learner's participation or disrupting the learning context as individuals attempt to assert themselves in ways that may not be related to the educational task.

EXPERIENCE	Adults bring their own experiences to the learning context. Most of these experiences are extremely valuable in the learning process of both the individual and the group. If this experience is devalued, adult learners may feel that it is not just the contribution, real or potential, that is devalued but they themselves. On the other hand, if their experience is at cross-purposes with the spirit of the present educational process, the adult may develop a feeling of inferiority or become disruptive. Where the adult teacher is skilful, the learner experience is skilfully exploited to minimize disruption and negative feeling.
READINESS TO LEARN	Adults are ready to learn the things that they perceive as being of value and relevant to them. It is therefore necessary to provide frequent reminders to the learners of the value of what is being learned. Often it is up to the learners to realize this value themselves.
ORIENTATION TO LEARNING	Adults generally have a problem-centred orientation to learning. This should not, however, be confused with the misconception that adults find it easier to deal with complex problems. The teacher has to judge carefully the level at which the adult will deal comfortably, but profitably, with a problem situation.

Teaching may be regarded in broad terms as a range of facilitation methods ranging from lecture, where the teacher has maximum control and the learner has minimum control, to private study, where the teacher has minimum control and the learner has maximum control. In between are facilitation methods such as small-group teaching, research supervision, laboratory or clinical teaching, the self-instructional system. Each of these methods can be divided further into sub-methods or they may be used in various combinations.



5-2-9

Teaching methods

Method	Teacher participation and control	Learner participation and control
Lecture	very high	very low
Small-group teaching	high	medium
Research supervision	medium	medium
Laboratory or clinic	medium	high
Self-instructional system	low	high
Private study	very low	very high

Since it is desirable to make adults autonomous learners, it is clear from the table which methods should be emphasized. Unfortunately, these methods take time to master, for both the teacher and the learner. It is also unfortunate that it is almost always the lecture method that people choose first in a teaching and learning situation.

Objectives

At the end of this session, participants should be able to—

- ◆ prepare a community-based advocacy plan
- ◆ describe the characteristics of a community-based social plan
- ◆ describe its components and process

5-2-1

Why advocacy?

- ◆ People know about HIV transmission yet their behaviour change has not been commensurate.
- ◆ Communities must advocate primary HIV prevention and MTCT prevention.

5-2-2

Tools for qualitative and quantitative research

- ◆ Qualitative
 - focus group discussions
 - key informant interviews
 - gender analysis tools
- ◆ Quantitative
 - baseline surveys
 - surveillance data
 - facility-based records

5-2-3

Social planning for advocacy

- ◆ Assesses community needs
- ◆ Sets priorities
- ◆ Identifies available resources
- ◆ Develops an operating plan

Its *function* is to solve identified problems and put services in place.

5-2-4

Community-based social planning

A proper plan ensures that

- experts and community members are actively involved
- all agencies concerned are in the network
- the community has its own organization
- traditional agencies are involved but do not patronize
- information flows openly and continuously
- rights of the community are protected

5-2-5

Effective communication

- ◆ Communication is
 - the mutual exchange of information and understanding by any effective means
 - the sending and receiving of messages
- ◆ Communication must involve two or more people
- ◆ It may be verbal—spoken, written, read— or non-verbal—gestured, signed, pictorial

5-2-6

The 4 elements of communication

<i>Sender</i>	the person who generates the message
<i>Message</i>	the message itself
<i>Medium</i>	the channel through which the message is passed
<i>Receiver</i>	the person who receives the message, intended recipient or not

5-2-7

The adult learner

<i>Self-concept</i>	Usually feels self-directed
<i>Experience</i>	Brings own experience to the learning situation
<i>Readiness to learn</i>	Needs to perceive value and relevance of material
<i>Orientation to learning</i>	Is usually problem oriented

5-2-8

Teaching methods

<u>Method</u>	<u>Teacher control</u>	<u>Learner control</u>
Lecture	very high	very low
Small groups	high	medium
Research supervision	medium	medium
Laboratory or clinic	medium	high
Self-instruction	low	high
Private study	very low	very high

5-2-9

Unit 3

Partnership in community mobilization

3

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Partnership in community mobilization



Mini-lecture—15 minutes

Exercise including presentation—1 hour 45 minutes

Facilitation methods

The starting point in mobilizing a community is to ensure that community members are full participants in the development initiative. It is necessary to assess the capacity of the community to meet its own needs and then relate it to efforts various outside agencies are making to support the community. Planned action that coincides with existing practice should not be allowed to disrupt, distort or give false hope to community activities.

Community-based initiatives should identify and create links to other sources of information and support. This is probably best done through developing and maintaining effective contacts with agencies working with the community. Above all, it is important to determine what networks exist in the community, who are the key players, and what are the preferred channels and methods of contact and communication.

Networking

Networking is working with other organizations, groups and individuals involved in activities that contribute to achieving a common goal. Networking occurs at all levels—national, district and community. Traditionally various community networks exist to multiply the efforts of one community group. More recent it has become clear that most efforts to provide services to communities demand a team approach. The reasons for this are to share the meagre resources, changing trends in communication, changing disease patterns, lack of adequate capacity in organizations to meet the increasing challenges, and reduction of governmental control on community development activities. If agencies do not coordinate and network, they are likely to duplicate efforts and waste valuable resources.



Exercise on networking and resource mobilization: This exercise should be relevant to the working situation of the participants and should lead to a plan that they can implement as soon as they complete the course. Participants should therefore form groups of a like community—for example, those from different districts, from different work bases of an institution, or from different organizations. In these groups they discuss the following and prepare a presentation on newsprint.

- Identify and list the institutions that they will involve or with whom they will network in the PMCT in their area.
- Identify any individuals whom they will involve.
- Consider what strategy they will use to establish networks.
- Suggest the coordination mechanism.
- Outline a strategy for mobilizing resources and raising funds internally and externally.
- Indicate a time frame and responsible persons.

Unit 4

Psychosocial issues related to MTCT and the community

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Psychosocial issues related to MTCT and the community



Unit 4 should take 2 hours.



This unit is undertaken as a workshop with participants divided into several task groups dealing with different issues. Participants are expected to draw cases from their own workplace. The groups are to deliberate on the issues and present the community perspective of the outcomes as

⇒ best practices

⇒ harmful practices

⇒ grey areas

Record the outcomes on newsprint and share in plenary.

Workshop tasks

Task 1

Working in a small group consider

⇒ confidentiality

⇒ stigma

⇒ domestic violence

Assess the extent of these problems in your community. Assess the consequences and suggest community-based solutions.

Task 2

Personal values and norms

Working in pairs, explore your personal values and norms in relation to the decisions that need to be made by a mother faced with the prospect or reality of MTCT. One member of the pair is interviewed and the other records. Switch roles if time allows. Set the basic interview questions in advance and follow up each question according to the responses.

Task 3

Community values and norms

Working in small groups, list the community values and norms that may be described as best practice and harmful practice in terms of MTCT of HIV/AIDS. If people are from different communities, separate the lists and compare them. Are there conflicting perceptions of the practices?

**The overhead transparencies can be obtained from the
Population Council website
www.popcouncil.org/horizons/horizons.html**

